

1/3

Oh 09/592,254

07/11/2005

=> fil hcap  
FILE 'HCAPLUS' ENTERED AT 09:03:56 ON 11 JUL 2005  
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FILE COVERS 1907 - 11 Jul 2005 VOL 143 ISS 3  
FILE LAST UPDATED: 10 Jul 2005 (20050710/ED)

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=> fil reg  
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STRUCTURE FILE UPDATES: 10 JUL 2005 HIGHEST RN 854370-36-8  
DICTIONARY FILE UPDATES: 10 JUL 2005 HIGHEST RN 854370-36-8

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TSCA INFORMATION NOW CURRENT THROUGH JANUARY 18, 2005

Please note that search-term pricing does apply when conducting SmartSELECT searches.

\*\*\*\*\*  
\*  
\* The CA roles and document type information have been removed from \*  
\* the IDE default display format and the ED field has been added, \*  
\* effective March 20, 2005. A new display format, IDERL, is now \*  
\* available and contains the CA role and document type information. \*  
\*  
\*\*\*\*\*

Crossover limits have been increased. See HELP CROSSOVER for details.

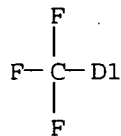
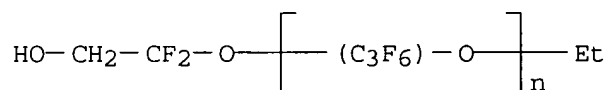
Experimental and calculated property data are now available. For more information enter HELP PROP at an arrow prompt in the file or refer to the file summary sheet on the web at:  
<http://www.cas.org/ONLINE/DBSS/registryss.html>

=&gt; d que 15

L1 1 SEA FILE=HCAPLUS ABB=ON PLU=ON "2000:876782"/AN  
 L3 TRANSFER PLU=ON L1 1- RN : 8 TERMS  
 L4 8 SEA FILE=REGISTRY ABB=ON PLU=ON L3  
 L5 2 SEA FILE=REGISTRY ABB=ON PLU=ON L4 AND PMS/CI

=&gt; d 15 1-2

L5 ANSWER 1 OF 2 REGISTRY COPYRIGHT 2005 ACS on STN  
 RN 313273-48-2 REGISTRY  
 ED Entered STN: 09 Jan 2001  
 CN Poly[oxy(trifluoro(trifluoromethyl)-1,2-ethanediyl)],  $\alpha$ -  
 [chlorotrifluoro(trifluoromethyl)ethyl]- $\omega$ -(1,1-difluoro-2-  
 hydroxyethoxy)- (9CI) (CA INDEX NAME)  
 MF (C3 F6 O)n C5 H3 Cl F8 O2  
 CI IDS, PMS  
 PCT Polyether  
 SR CA  
 LC STN Files: CA, CAPLUS  
 DT.CA Caplus document type: Patent  
 RLD.P Roles for non-specific derivatives from patents: PREP (Preparation);  
 USES (Uses)



D1-Cl

3 ( D1-F )

1 REFERENCES IN FILE CA (1907 TO DATE)  
 1 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA  
 1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L5 ANSWER 2 OF 2 REGISTRY COPYRIGHT 2005 ACS on STN  
 RN 138861-14-0 REGISTRY  
 ED Entered STN: 07 Feb 1992  
 CN Tolonate HDT-LV (9CI) (CA INDEX NAME)  
 ENTE The isocyanurate of hexamethylene diisocyanate (Rhone-Poulenc)  
 MF Unspecified  
 CI PMS, COM, MAN

PCT Manual registration

SR CA

LC STN Files: CA, CAPLUS, USPAT2, USPATFULL

DT.CA Caplus document type: Journal; Patent

RL.P Roles from patents: BIOL (Biological study); PROC (Process); PRP (Properties); RACT (Reactant or reagent); USES (Uses)

RLD.P Roles for non-specific derivatives from patents: PREP (Preparation); PRP (Properties); USES (Uses)

RL.NP Roles from non-patents: RACT (Reactant or reagent); USES (Uses)

RLD.NP Roles for non-specific derivatives from non-patents: PREP (Preparation); PRP (Properties); USES (Uses)

\*\*\* STRUCTURE DIAGRAM IS NOT AVAILABLE \*\*\*

35 REFERENCES IN FILE CA (1907 TO DATE)

16 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA

35 REFERENCES IN FILE CAPLUS (1907 TO DATE)

=> file stnguide

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FILE CONTAINS CURRENT INFORMATION.

LAST RELOADED: Jul 8, 2005 (20050708/UP).

=> => fil reg

FILE 'REGISTRY' ENTERED AT 12:49:27 ON 11 JUL 2005  
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DICTIONARY FILE UPDATES: 10 JUL 2005 HIGHEST RN 854370-36-8

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\*\*\*\*\*  
\*  
\* The CA roles and document type information have been removed from \*  
\* the IDE default display format and the ED field has been added, \*  
\* effective March 20, 2005. A new display format, IDERL, is now \*  
\* available and contains the CA role and document type information. \*  
\*  
\*\*\*\*\*

Crossover limits have been increased. See HELP CROSSOVER for details.

Experimental and calculated property data are now available. For more  
information enter HELP PROP at an arrow prompt in the file or refer  
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=> fil zcap

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FILE LAST UPDATED: 10 Jul 2005 (20050710/ED)

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=> fil hcap

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FILE LAST UPDATED: 10 Jul 2005 (20050710/ED)

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=> fil medlin

FILE 'MEDLINE' ENTERED AT 12:49:34 ON 11 JUL 2005

FILE LAST UPDATED: 9 JUL 2005 (20050709/UP). FILE COVERS 1950 TO DATE.

On December 19, 2004, the 2005 MeSH terms were loaded.

The MEDLINE reload for 2005 is now available. For details enter HELP RLOAD at an arrow prompt (=>). See also:

<http://www.nlm.nih.gov/mesh/>  
[http://www.nlm.nih.gov/pubs/techbull/nd04/nd04\\_mesh.html](http://www.nlm.nih.gov/pubs/techbull/nd04/nd04_mesh.html)

OLDMEDLINE now back to 1950.

MEDLINE thesauri in the /CN, /CT, and /MN fields incorporate the MeSH 2005 vocabulary.

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=> fil biosis

FILE 'BIOSIS' ENTERED AT 12:49:37 ON 11 JUL 2005  
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FILE COVERS 1969 TO DATE.  
CAS REGISTRY NUMBERS AND CHEMICAL NAMES (CNs) PRESENT  
FROM JANUARY 1969 TO DATE.

RECORDS LAST ADDED: 8 July 2005 (20050708/ED)

FILE RELOADED: 19 October 2003.

=> fil pascal

FILE 'PASCAL' ENTERED AT 12:49:39 ON 11 JUL 2005

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FILE LAST UPDATED: 11 JUL 2005 <20050711/UP>

FILE COVERS 1977 TO DATE.

>>> SIMULTANEOUS LEFT AND RIGHT TRUNCATION IS AVAILABLE  
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=> fil jicst

FILE 'JICST-EPLUS' ENTERED AT 12:49:43 ON 11 JUL 2005

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FILE COVERS 1985 TO 4 JUL 2005 (20050704/ED)

THE JICST-EPLUS FILE HAS BEEN RELOADED TO REFLECT THE 1999 CONTROLLED  
TERM (/CT) THESAURUS RELOAD.

=> fil wsca

FILE 'WSCA' ENTERED AT 12:49:56 ON 11 JUL 2005

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FILE LAST UPDATED: 27 JUN 2005 <20050627/UP>

FILE COVERS 1976 TO DATE

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=> fil apollit

FILE 'APOLLIT' ENTERED AT 12:50:02 ON 11 JUL 2005

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FILE LAST UPDATED: 29 JUN 2005 <20050629/UP>

FILE COVERS 1973 TO DATE

=> fil corrosion

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FILE LAST UPDATED: 22 JUN 2005 <20050622/UP>

FILE COVERS 1980 TO DATE.

=> fil ema

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FILE LAST UPDATED: 29 JUN 2005 <20050629/UP>  
FILE COVERS 1986 TO DATE.

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FILE LAST UPDATED: 7 JUL 2005 <20050707/UP>  
FILE COVERS 1972 TO DATE

>>> Simultaneous left and right truncation is available in the  
basic index (/BI), and in the controlled term (/CT),  
geographical term (/GT), and non-polymer term (/NPT) fields. <<<

>>> The RAPRA Classification Code is available as a PDF file  
>>> and may be downloaded free-of-charge from:  
>>> [http://www.stn-international.de/stndatabases/details/rapra\\_classcodes.pdf](http://www.stn-international.de/stndatabases/details/rapra_classcodes.pdf)

=> fil embase  
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FILE COVERS 1974 TO 7 Jul 2005 (20050707/ED)

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FILE LAST UPDATED: 8 JUL 2005 <20050708/UP>  
FILE COVERS 1976 TO DATE.

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FILE COVERS 1973 TO 25 May 2005 (20050525/ED)

=> fil wpix  
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FILE LAST UPDATED: 7 JUL 2005 <20050707/UP>  
MOST RECENT DERWENT UPDATE: 200543 <200543/DW>  
DERWENT WORLD PATENTS INDEX SUBSCRIBER FILE, COVERS 1963 TO DATE

>>> FOR A COPY OF THE DERWENT WORLD PATENTS INDEX STN USER GUIDE,

PLEASE VISIT:

[http://www.stn-international.de/training\\_center/patents/stn\\_guide.pdf](http://www.stn-international.de/training_center/patents/stn_guide.pdf) <<<

>>> FOR DETAILS OF THE PATENTS COVERED IN CURRENT UPDATES, SEE  
<http://thomsonderwent.com/coverage/latestupdates/> <<<

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>>> NEW! FAST-ALERTING ACCESS TO NEWLY-PUBLISHED PATENT  
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>>> THE CPI AND EPI MANUAL CODES HAVE BEEN REVISED FROM UPDATE 200501.  
PLEASE CHECK:  
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FOR DETAILS. <<<

=> fil uspatfull

FILE 'USPATFULL' ENTERED AT 12:50:52 ON 11 JUL 2005  
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FILE COVERS 1971 TO PATENT PUBLICATION DATE: 7 Jul 2005 (20050707/PD)  
FILE LAST UPDATED: 7 Jul 2005 (20050707/ED)  
HIGHEST GRANTED PATENT NUMBER: US6915531  
HIGHEST APPLICATION PUBLICATION NUMBER: US2005150027  
CA INDEXING IS CURRENT THROUGH 7 Jul 2005 (20050707/UPCA)  
ISSUE CLASS FIELDS (/INCL) CURRENT THROUGH: 7 Jul 2005 (20050707/PD)  
REVISED CLASS FIELDS (/NCL) LAST RELOADED: Jun 2005  
USPTO MANUAL OF CLASSIFICATIONS THESAURUS ISSUE DATE: Jun 2005

>>> USPAT2 is now available. USPATFULL contains full text of the <<<  
>>> original, i.e., the earliest published granted patents or <<<  
>>> applications. USPAT2 contains full text of the latest US <<<  
>>> publications, starting in 2001, for the inventions covered in <<<  
>>> USPATFULL. A USPATFULL record contains not only the original <<<  
>>> published document but also a list of any subsequent <<<  
>>> publications. The publication number, patent kind code, and <<<  
>>> publication date for all the US publications for an invention <<<  
>>> are displayed in the PI (Patent Information) field of USPATFULL <<<  
>>> records and may be searched in standard search fields, e.g., /PN, <<<  
>>> /PK, etc. <<<

>>> USPATFULL and USPAT2 can be accessed and searched together <<<  
>>> through the new cluster USPATALL. Type FILE USPATALL to <<<  
>>> enter this cluster. <<<  
>>> <<<  
>>> Use USPATALL when searching terms such as patent assignees, <<<  
>>> classifications, or claims, that may potentially change from <<<  
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FILE CONTAINS CURRENT INFORMATION.

LAST RELOADED: Jul 8, 2005 (20050708/UP).

=&gt; d que 151

L12 ( 1)SEA FILE=REGISTRY ABB=ON PLU=ON 138861-14-0/RN  
 L13 ( 35)SEA FILE=HCAPLUS ABB=ON PLU=ON L12  
 L14 ( 35)SEA FILE=HCAPLUS ABB=ON PLU=ON ( L13 OR 138861-14-0D? OR  
 138861-14-0P?)  
 L15 QUE ABB=ON PLU=ON ?FLUORO? OR ?FLUORIN? OR ?PERFLUORO?  
 OR ?PERFLUORIN? OR (PER(1W)FLUORO?) OR (PER(1W)FLUORIN?)  
 L16 ( 2)SEA FILE=HCAPLUS ABB=ON PLU=ON L14 (L) L15  
 L17 QUE ABB=ON PLU=ON ?URETHAN? OR ?POLYURETHAN? OR (POLY?  
 (1W)?URETHAN?) OR ?OLIGOURETHAN? OR (OLIGO?(1W)?URETHAN?)  
 L18 QUE ABB=ON PLU=ON ?ISOCYANAT? OR (ISO(1W)CYANAT?) OR ?  
 ISOCYANURAT? OR (ISO(1W)CYANURAT?)  
 L19 ( 119618)SEA FILE=HCAPLUS ABB=ON PLU=ON POLYURETHANES+PFT/CT  
 L20 ( 2232)SEA FILE=HCAPLUS ABB=ON PLU=ON L19 (L) L15  
 L21 ( 62806)SEA FILE=HCAPLUS ABB=ON PLU=ON FLUOROPOLYMERS+PFT/CT  
 L22 ( 1105)SEA FILE=HCAPLUS ABB=ON PLU=ON L21(L) L17  
 L23 ( 134)SEA FILE=HCAPLUS ABB=ON PLU=ON (L20 OR L22) (L) L18  
 L24 ( 118747)SEA FILE=HCAPLUS ABB=ON PLU=ON "URETHANE POLYMERS"+PFT,NT/CT  
  
 L25 ( 53401)SEA FILE=HCAPLUS ABB=ON PLU=ON "URETHAN POLYMERS"+PFT,NT/CT  
 L26 ( 2232)SEA FILE=HCAPLUS ABB=ON PLU=ON (L24 OR L25) (L) L15  
 L27 ( 62806)SEA FILE=HCAPLUS ABB=ON PLU=ON FLUOROPLASTS+PFT,NT/CT  
 L28 ( 1105)SEA FILE=HCAPLUS ABB=ON PLU=ON L27 (L) L17  
 L29 ( 134)SEA FILE=HCAPLUS ABB=ON PLU=ON (L26 OR L28) (L) L18  
 L30 ( 134)SEA FILE=HCAPLUS ABB=ON PLU=ON L23 OR L29  
 L31 ( 218843)SEA FILE=HCAPLUS ABB=ON PLU=ON FILMS+PFT,NT/CT  
 L32 ( 270449)SEA FILE=HCAPLUS ABB=ON PLU=ON COATINGS+PFT,NT/CT  
 L33 ( 374794)SEA FILE=HCAPLUS ABB=ON PLU=ON "COATING MATERIALS"+PFT,NT/CT  
  
 L34 ( 298475)SEA FILE=HCAPLUS ABB=ON PLU=ON "COATING(S)"+PFT,NT/CT  
 L35 ( 262728)SEA FILE=HCAPLUS ABB=ON PLU=ON "COATING MATERIALS (L)  
 HARD"+PFT,NT/CT  
 L36 ( 40)SEA FILE=HCAPLUS ABB=ON PLU=ON L30 AND (L31 OR L32 OR L33 OR  
 L34 OR L35)  
 L37 QUE ABB=ON PLU=ON WATER OR H2O OR HYDRO OR MOISTURE  
 L38 QUE ABB=ON PLU=ON OIL OR GREASE OR LIPID OR FAT  
 L39 QUE ABB=ON PLU=ON ?PROOF? OR ?REPEL? OR ?RESIST?  
 L40 ( 83954)SEA FILE=HCAPLUS ABB=ON PLU=ON L37(1A) L39  
 L41 ( 33856)SEA FILE=HCAPLUS ABB=ON PLU=ON ?WATERPROOF?  
 L42 ( 15181)SEA FILE=HCAPLUS ABB=ON PLU=ON L38 (1A) L39  
 L43 ( 3499)SEA FILE=HCAPLUS ABB=ON PLU=ON ?OILPROOF?  
 L44 ( 8)SEA FILE=HCAPLUS ABB=ON PLU=ON L36 AND (L40 OR L41)  
 L45 ( 4)SEA FILE=HCAPLUS ABB=ON PLU=ON L36 AND (L42 OR L43)  
 L46 ( 40)SEA FILE=HCAPLUS ABB=ON PLU=ON L36 OR L44 OR L45  
 L47 ( 22)SEA FILE=HCAPLUS ABB=ON PLU=ON L46 AND (AY<2000 OR PY<2000  
 OR PRY<2000)  
 L48 ( 74)SEA FILE=HCAPLUS ABB=ON PLU=ON L36 OR L12 OR L16  
 L49 ( 40)SEA FILE=HCAPLUS ABB=ON PLU=ON L48 AND (L23 OR L30)  
 L50 ( 40)SEA FILE=HCAPLUS ABB=ON PLU=ON L49 AND L46  
 L51 22 SEA FILE=HCAPLUS ABB=ON PLU=ON L47 AND L50

=&gt; d que 110

L1 ( 30724)SEA FILE=WPIX ABB=ON PLU=ON C08G018?/IPC  
 L2 ( 22557)SEA FILE=WPIX ABB=ON PLU=ON (C09D175? OR C08L075?)/IPC  
 L3 ( 92448)SEA FILE=WPIX ABB=ON PLU=ON (A05-G? OR A12-B01K OR A12-B01  
 OR A12-B01A OR A12-B01B OR G02-A02H OR G02-A02B)/MC  
 L4 ( 10935)SEA FILE=WPIX ABB=ON PLU=ON L1 AND L2  
 L5 ( 96793)SEA FILE=WPIX ABB=ON PLU=ON L4 OR L3

L6 ( 2140)SEA FILE=WPIX ABB=ON PLU=ON (?FLUORO?/BIX OR ?FLUORIN?/BIX  
OR ?PERFLUORO?/BIX OR ?PERFLUORIN?/BIX OR (PER/BIX(1W)FLUORO?/B  
IX) OR (PER/BIX(1W)FLUORIN?/BIX)) (2A) (?URETHAN?/BIX OR  
?POLYURETHAN?/BIX OR (POLY?/BIX(1W)?URETHAN?/BIX) OR ?OLIGOURET  
HAN?/BIX OR (OLIGO?/BIX(1W)?URETHAN?/BIX))

L7 ( 510)SEA FILE=WPIX ABB=ON PLU=ON L5 AND L6

L8 ( 125)SEA FILE=WPIX ABB=ON PLU=ON L7 AND ((WATERPROOF? OR OILPROOF?  
)/BIX OR (((WATER/BIX OR H2O/BIX OR HYDRO/BIX OR MOISTURE/BIX)  
OR (OIL/BIX OR GREASE/BIX OR LIPID/BIX OR FAT/BIX)) (3A) (?PROOF?  
/BIX OR ?REPEL?/BIX OR ?RESIST?/BIX)))

L9 27 SEA FILE=WPIX ABB=ON PLU=ON L8 AND L1 AND L2 AND L3

L10 16 SEA FILE=WPIX ABB=ON PLU=ON L9 AND (AY<2000 OR PY<2000 OR  
PRY<2000)

=> d que 198

L93 ( 1)SEA FILE=HCAPLUS ABB=ON PLU=ON "2000:876782"/AN

L94 SEL PLU=ON L93 1- RN : 8 TERMS

L95 ( 8)SEA FILE=REGISTRY ABB=ON PLU=ON L94

L96 2 SEA FILE=REGISTRY ABB=ON PLU=ON L95 AND PMS/CI

L97 40 SEA FILE=USPATFULL ABB=ON PLU=ON L96

L98 1 SEA FILE=USPATFULL ABB=ON PLU=ON L97 AND ((?FLUORO?/BI,IT,AB  
OR ?FLUORIN?/BI,IT,AB OR ?PERFLUORO?/BI,IT,AB OR ?PERFLUORIN?/B  
I,IT,AB OR (PER/BI,IT,AB(1W)FLUORO?/BI,IT,AB) OR (PER/BI,IT,AB(  
1W)FLUORIN?/BI,IT,AB)) (3A) (?URETHAN?/BI,IT,AB OR ?POLYURETHAN  
?/BI,IT,AB OR (POLY?/BI,IT,AB(1W)?URETHAN?/BI,IT,AB) OR  
?OLIGOURETHAN?/BI,IT,AB OR (OLIGO?/BI,IT,AB(1W)?URETHAN?/BI,IT,  
AB)))

=> d his 1103

(FILE 'MEDLINE, BIOSIS, PASCAL, JICST-EPLUS, WSCA, APOLLIT, CORROSION,  
EMA, RAPRA, EMBASE, SCISEARCH' ENTERED AT 12:18:00 ON 11 JUL 2005)

L103 7 S L102 AND (AY<2000 OR PY<2000 OR PRY<2000 OR MY<2000)

=> d que 1103

L55 QUE ABB=ON PLU=ON ?FLUORO? OR ?FLUORIN? OR ?PERFLUORO?  
OR ?PERFLUORIN? OR (PER(1W)FLUORO?) OR (PER(1W)FLUORIN?)

L57 QUE ABB=ON PLU=ON ?URETHAN? OR ?POLYURETHAN? OR (POLY?  
(1W)?URETHAN?) OR ?OLIGOURETHAN? OR (OLIGO?(1W)?URETHAN?)

L58 QUE ABB=ON PLU=ON ?ISOCYANAT? OR (ISO(1W)CYANAT?) OR ?  
ISOCYANURAT? OR (ISO(1W)CYANURAT?)

L77 QUE ABB=ON PLU=ON WATER OR H2O OR HYDRO OR MOISTURE

L78 QUE ABB=ON PLU=ON OIL OR GREASE OR LIPID OR FAT

L79 QUE ABB=ON PLU=ON ?PROOF? OR ?REPEL? OR ?RESIST?

L99 1277 SEA L55 (3A) L57

L100 336 SEA L99 AND L58

L101 37 SEA L100 AND (?WATERPROOF? OR ?OILPROOF? OR ((L77 OR L78) (2A)  
L79))

L102 37 DUP REM L101 (0 DUPLICATES REMOVED)

L103 7 SEA L102 AND (AY<2000 OR PY<2000 OR PRY<2000 OR MY<2000)

=> dup rem 151 110 198 1103

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PROCESSING COMPLETED FOR L98  
PROCESSING COMPLETED FOR L103  
L113           45 DUP REM L51 L10 L98 L103 (1 DUPLICATE REMOVED)  
                  ANSWERS '1-22' FROM FILE HCAPLUS  
                  ANSWERS '23-37' FROM FILE WPIX  
                  ANSWER '38' FROM FILE USPATFULL  
                  ANSWERS '39-40' FROM FILE WSCA  
                  ANSWERS '41-44' FROM FILE RAPRA  
                  ANSWER '45' FROM FILE SCISEARCH

=> file stnguide

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L113 ANSWER 1 OF 45 HCAPLUS COPYRIGHT 2005 ACS on STN DUPLICATE 1

ACCESSION NUMBER: 2000:876782 HCAPLUS  
 DOCUMENT NUMBER: 134:43472  
 TITLE: Fluorinated oligourethanes  
 INVENTOR(S): Turri, Stefano; Levi, Marinella; Trombetta, Tania  
 PATENT ASSIGNEE(S): Ausimont S.p.A., Italy  
 SOURCE: Eur. Pat. Appl., 17 pp.  
 CODEN: EPXXDW  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 1059319	A2	20001213	EP 2000-112141	20000606 <--
EP 1059319	A3	20020123		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
JP 2001019736	A2	20010123	JP 2000-176155	20000612 <--
PRIORITY APPLN. INFO.:			IT 1999-MI1303	A 19990611 <--

ED Entered STN: 15 Dec 2000

AB Fluorinated oligourethanes, having number average mol. weight lower than or equal to 9,000 and a branched structure, are formed of the following monomers and macromers: (a) aliphatic, cycloaliph. or aromatic polyisocyanates, (b) X0(CR1AR2A)bY0 [R1A, R2A = H or C1-10 aliphatic radical; b = 1-20; X0 = OH or SH; Y0 = anionic or cationic salifiable function or when X0 = OH, b = 1, R1A = R2A = H, and Y0 = CH2O(CH2CH2O)nMe, n = 3-20]; one or more of the following compds.: (c) bifunctional hydroxyl (per)fluoropolyethers (PFPE diols) having number average mol. weight in the range 400-3,000, (e) monofunctional hydroxyl (per)fluoropolyethers or monofunctional hydroxyl (per)fluoroalkanes (e'), having number average mol. weight in the range 300-1,000; and, optionally, the following compds.: (d) X0(CR1AR2A)bY0 (R1A, R2A, b, and X0 = same as above; Y0 = oxiranyl, OCOR1BC:CH2, Si(ORx)3, CH2CH:CH2, or OCH:CH2; R1B = H or Me; Rx = C1-5 alkyl); (d1) hydrogen-active compds., capable to form bonds with the NCO functions stable at the hydrolysis but weak at heat. These oligourethanes are useful as water- and oil **-repellent** coatings for substrates with high porosity. A typical IPDI-based oligourethane was manufactured by stirring a solution containing 45 g Vestanat T1890, 51 g EtOAc, 6.189 g dimethylaminopropanol, 0.6 mL 20% Fascat 4224 solution 1 h at 70°, adding 240 g EtOAc and 68.1 g HOCH2CF2O(CF2CF2O)p(CF2O)qCF2CH2OH (p/q = 2.2) and heating 8 h at reflux.

IC ICM C08G018-38  
 ICS C08G018-50

CC 42-10 (Coatings, Inks, and Related Products)  
 Section cross-reference(s): 35

ST fluorine contg oligourethane **waterproof oilproof**  
 coating porous substrate; dimethylaminopropanol modified  
 polyoxyperfluoroalkylene oligourethane manuf

- IT **Coating materials**  
(**oil-resistant**; fluorinated oligourethanes for water- and **oil-resistant** coatings for porous substrates)
- IT **Polyurethanes, uses**  
RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
(**polyisocyanurate-polyoxyalkylene-, fluorine**-containing, reaction products, with dimethylaminopropanol; **fluorinated oligourethanes** for water- and **oil-resistant** coatings for porous substrates)
- IT **Fluoropolymers, uses**  
RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
(**polyisocyanurate-polyoxyalkylene-polyurethane-**, reaction products, with dimethylaminopropanol; fluorinated **oligourethanes** for water- and **oil-resistant** coatings for porous substrates)
- IT Polyoxyalkylenes, uses  
RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
(polyisocyanurate-polyurethane-, fluorine-containing, reaction products, with dimethylaminopropanol; fluorinated oligourethanes for water- and **oil-resistant** coatings for porous substrates)
- IT Polyisocyanurates  
RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
(polyoxyalkylene-polyurethane-, fluorine-containing, reaction products, with dimethylaminopropanol; fluorinated oligourethanes for water- and **oil-resistant** coatings for porous substrates)
- IT **Coating materials**  
(**water-resistant**; fluorinated oligourethanes for water- and **oil-resistant** coatings for porous substrates)
- IT 96-29-7DP, reaction products with polyisocyanurate-polyoxyperfluoroalkylene-polyurethanes and dimethylaminopropanol  
818-61-1DP, reaction products with polyisocyanurate-polyoxyperfluoroalkylene-polyurethanes and dimethylaminopropanol  
822-06-0DP, HDI, polyisocyanurate-polyoxyperfluoroalkylene-polyurethanes, reaction products with dimethylaminopropanol 3179-63-3DP, 3-(Dimethylamino)propanol, reaction products with polyisocyanurate-polyoxyperfluoroalkylene-polyurethanes 4098-71-9DP, IPDI, polyisocyanurate-polyoxyperfluoroalkylene-polyurethanes, reaction products with dimethylaminopropanol 73666-46-3DP, Vestanat T1890, polymers with polyoxyperfluoroalkylene diols, reaction products with dimethylaminopropanol **138861-14-0DP**, Tolonate HDT-LV, polymers with **polyoxyperfluoroalkylene** diols, reaction products with dimethylaminopropanol 313273-48-2DP, reaction products with polyisocyanurate-polyoxyperfluoroalkylene-polyurethanes and dimethylaminopropanol  
RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
(**fluorinated oligourethanes** for water- and **oil-resistant** coatings for porous substrates)

=> d ibib ed ab hitind 2-22

YOU HAVE REQUESTED DATA FROM FILE 'WPIX, HCAPLUS, USPATFULL, WSCA, RAPRA, SCISEARCH' - CONTINUE? (Y)/N:y

L113 ANSWER 2 OF 45 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2000:778496 HCAPLUS

DOCUMENT NUMBER: 133:336602

TITLE: Radiation-curable, oil- and **water-repellent**, transparent coating compositions, coating process, and coated articles

INVENTOR(S): Kirimoto, Kazusuke

PATENT ASSIGNEE(S): Asahi Glass Co., Ltd., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 11 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2000309725	A2	20001107	JP 1999-120548	19990427 <--
PRIORITY APPLN. INFO.:			JP 1999-120548	19990427 <--

ED Entered STN: 07 Nov 2000

AB The compns. comprise (A) compds. having polyfluoroalkyl groups or polyfluoroalkenyl groups and unsatd. groups polymerizable by actinic ray, (B) compds. with mol. weight  $\geq 1000$  not having F but  $\geq 2$  unsatd. groups polymerizable by actinic ray, (C) compds. with mol. weight  $< 1000$  not having F but  $\geq 1$  unsatd. groups polymerizable by actinic ray, and (D) actinic ray polymerization initiators. Thus, 100 g of an adduct (mol. weight 1300) of dipentaerythritol partial acrylate and HDI partial isocyanurate was mixed with 76 g trimethylolpropane triacrylate, further mixed with 16 g  $F(CF_2)_nCH_2CH_2OC(=O)CH_2$  ( $n = 8, 10$ ), further mixed with 8 g benzoin iso-Bu ether, applied on a glass sheet, and irradiated with UV to form a coating showing contact angle  $105^\circ$  to  $H_2O$  and  $75^\circ$  to liquid paraffin, haze 3.8,  $60^\circ$  gloss 83%, pencil hardness 5H, and no bubbles.

IC ICM C09D004-00  
ICS C08L101-04; C09D005-00

CC 42-7 (Coatings, Inks, and Related Products)

ST fluoroalkyl acrylate urethane polymer coating; **water repellent** coating fluoroalkyl acrylate polymer; **oil repellent** coating fluoroalkyl acrylate polymer; transparent coating fluoroalkyl acrylate polymer

IT **Polyurethanes, uses**  
**Polyurethanes, uses**  
RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
(acrylic-**polyisocyanurate**-, **fluorine**-containing; radiation-curable, oil- and **water-repellent**, transparent coating compns.)

IT Polyisocyanurates  
Polyisocyanurates  
RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
(acrylic-polyurethane-, fluorine-containing; radiation-curable, oil- and **water-repellent**, transparent coating compns.)

IT **Coating materials**  
(oil- and **water-resistant**; radiation-curable, oil-

- and **water-repellent**, transparent coating compns.)
- IT Glass substrates  
(radiation-curable, oil- and **water-repellent**, transparent coating compns.)
- IT **Coating materials**  
(radiation-curable; radiation-curable, oil- and **water-repellent**, transparent coating compns.)
- IT Polyesters, miscellaneous  
RL: MSC (Miscellaneous)  
(substrate; radiation-curable, oil- and **water-repellent**, transparent coating compns.)
- IT **Coating materials**  
(transparent; radiation-curable, oil- and **water-repellent**, transparent coating compns.)
- IT 423-82-5DP, polymers with acrylates 822-06-0DP, Hexamethylene diisocyanate, partial isocyanurate, reaction products with dipentaerythritol acrylate, fluoroalkyl acrylates, and other acrylates 2399-48-6DP, Tetrahydrofurfuryl acrylate, polymers with urethane acrylates and fluoroalkyl acrylates 3066-71-5DP, Cyclohexyl acrylate, polymers with urethane acrylates and fluoroalkyl acrylates 5888-33-5DP, Isobornyl acrylate, polymers with urethane acrylates and fluoroalkyl acrylates 15577-26-1DP, 2-Propenoic acid, 3,3,4,4,5,5,6,6,7,7,8,8,9,10,10,10-hexadecafluoro-9-(trifluoromethyl)decyl ester, polymers with acrylates 15625-89-5DP, Trimethylolpropane triacrylate, polymers with urethane acrylates and fluoroalkyl acrylates 17741-60-5DP, 2-(Perfluorodecyl)ethyl acrylate, polymers with acrylates 27905-45-9DP, 2-(Perfluorooctyl)ethyl acrylate, polymers with acrylates 42594-17-2DP, polymers with urethane acrylates and fluoroalkyl acrylates 52956-81-7DP, 2-Propenoic acid, 3,3,4,4,5,5,6,6,7,7,8,8,9,9,10,10,11,12,12,12-eicosafuoro-11-(trifluoromethyl)dodecyl ester, polymers with acrylates 77641-99-7DP, Dipentaerythritol acrylate, reaction products with HDI partial isocyanurate, polymers with fluoroalkyl acrylates and other acrylates 94108-97-1DP, Di(trimethylolpropane) tetraacrylate, polymers with urethane acrylates and fluoroalkyl acrylates  
RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
(radiation-curable, oil- and **water-repellent**, transparent coating compns.)
- IT 25038-59-9, Poly(ethylene terephthalate), miscellaneous  
RL: MSC (Miscellaneous)  
(substrate; radiation-curable, oil- and **water-repellent**, transparent coating compns.)

L113 ANSWER 3 OF 45 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 1999:753295 HCAPLUS

DOCUMENT NUMBER: 132:4129

TITLE: Fluoropolymer powder coating compositions and their production

INVENTOR(S): Barbee, Robert B.

PATENT ASSIGNEE(S): Eastman Chemical Company, USA

SOURCE: PCT Int. Appl., 24 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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WO 9960066 A1 19991125 WO 1998-US27269 19981222 <--  
 RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL,  
 PT, SE

PRIORITY APPLN. INFO.: WO 1998-US27269 19981222 <--

ED Entered STN: 26 Nov 1999

AB Thermosetting, powder coating compns. comprised of blends of a hydroxyl functional fluoropolymer and a solid or crystalline hydroxylated aliphatic polyester of a cycloaliph. diacid and a diol in combination with a crosslinking agent are provided. Such compns., when applied to a substrate and heated, provide crosslinked coatings having a combination of desirable properties including good impact strength, flexibility, UV stability, and gloss. An example is based on butanediol-dimethyl 1,4-cyclohexanedicarboxylate copolymer, Lumiflon 710F, and Vestagon 1530.

IC ICM C09D167-02

ICS C09D127-12

CC 42-10 (Coatings, Inks, and Related Products)

IT **Polyurethanes, uses**

**Polyurethanes, uses**

**Polyurethanes, uses**

RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)

(polyester-, **fluorine**-containing; production of **isocyanate**-crosslinked **fluoropolymer**-polyester powder coatings)

IT **Fluoropolymers, uses**

RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)

(**polyester-polyurethane**-; production of **isocyanate**-crosslinked fluoropolymer-polyester powder coatings)

IT **Coating materials**

(powder; production of isocyanate-crosslinked fluoropolymer-polyester powder coatings)

REFERENCE COUNT: 7 THERE ARE 7 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L113 ANSWER 4 OF 45 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 1999:666741 HCAPLUS

DOCUMENT NUMBER: 132:252487

TITLE: Structure-property relationships of polyfluoroether coatings

AUTHOR(S): Turri, S.; Scicchitano, M.; Marchetti, R.; Sanguineti, A.

CORPORATE SOURCE: Centro Ricerche e Sviluppo Ausimont SpA, Bollate, 20021, Italy

SOURCE: Surface Coatings International (1999), 82(8), 384-389

CODEN: SCOIE6; ISSN: 1356-0751

PUBLISHER: Oil and Colour Chemists' Association

DOCUMENT TYPE: Journal

LANGUAGE: English

ED Entered STN: 20 Oct 1999

AB Fluoro-polyisocyanate coatings suitable for low temperature curing were obtained

from fluoropolyether macromers with the cyclic trimers of HDI and IPDI. The fluoropolymers have excellent surface properties, i.e., are easy to clean and provide efficient repellency to graffiti while presenting good weathering ability and resistance to solvents. The mech. properties can be adjusted by controlling the isocyanate content ; typically IPDI produces harder coatings with very short tack-free time, while HDI-based coatings have better abrasion resistance and reactivity at low temperature The

surface properties of fluoropolyethers can be associated to chain mobility and migration toward the surface layer of the coating.

CC 42-4 (Coatings, Inks, and Related Products)

IT **Coating materials**

(abrasion-resistant; composition and mech. and optical and surface properties of fluoropolyurethanes based on cyclic diisocyanates and fluoropolyethers)

IT **Coating materials**

(antisoiling; composition and mech. and optical and surface properties of fluoropolyurethanes based on cyclic diisocyanates and fluoropolyethers)

IT **Polyurethanes, uses**

**Polyurethanes, uses**

RL: PRP (Properties); TEM (Technical or engineered material use); USES (Uses)

(fluorine-containing; composition and mech. and optical and surface properties of **fluoropolyurethanes** based on cyclic **diisocyanates** and **fluoropolyethers**)

IT **Fluoropolymers, uses**

**Fluoropolymers, uses**

RL: PRP (Properties); TEM (Technical or engineered material use); USES (Uses)

(polyoxyalkylene-, polymers with hexamethylene **diisocyanate** trimer and isophorone **diisocyanate** trimer; composition and mech. and optical and surface properties of **fluoropolyurethanes** based on cyclic **diisocyanates** and fluoropolyethers)

IT **Fluoropolymers, uses**

**Fluoropolymers, uses**

RL: PRP (Properties); TEM (Technical or engineered material use); USES (Uses)

(polyurethane-, composition and mech. and optical and surface properties of **fluoropolyurethanes** based on cyclic **diisocyanates** and fluoropolyethers)

REFERENCE COUNT: 14 THERE ARE 14 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L113 ANSWER 5 OF 45 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 1998:282427 HCAPLUS

DOCUMENT NUMBER: 129:16520

TITLE: Low surface energy polyisocyanates, their preparation and use in one-or two-component coating compositions  
INVENTOR(S): Yeske, Philip E.; Slack, William E.; Squiller, Edward P.

PATENT ASSIGNEE(S): Bayer Corp., USA

SOURCE: U.S., 8 pp.

CODEN: USXXAM

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 5747629	A	19980505	US 1996-764891	19961216 <--
CA 2221827	AA	19980616	CA 1997-2221827	19971120 <--
EP 848023	A1	19980617	EP 1997-121224	19971203 <--
EP 848023	B1	20030827		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI				
JP 10176026	A2	19980630	JP 1997-362292	19971212 <--

PRIORITY APPLN. INFO.: US 1996-764891 A 19961216 <--  
ED Entered STN: 15 May 1998  
AB Polyisocyanate adducts containing allophanate groups, F and optionally isocyanurate groups are prepared by reacting compds. (a) which (i) are substantially free of OH groups and NCO groups, (ii) have an average  $\geq 2$  urethane groups/mol. and (iii) contain 0-50% F, based on the weight of the polyisocyanate adducts, with an excess quantity, based on the equivalent of urethane groups, of polyisocyanates (b), which optionally contain F, to form polyisocyanate adducts and optionally removing at least a portion of the unreacted excess polyisocyanates (b), provided that compds. (a) and polyisocyanates (b) contain a total of at least 0.001% F. Thus, Fluorad FC 10-1,6-hexamethylene diisocyanate (I) diurethane adduct was heated at 120° with I in the presence of trimerization catalyst, and I stripped to give a product (allophanate and isocyanurate group-containing) having surface tension 24.3 dynes/cm.  
IC ICM C08G018-28  
INCL 528070000  
CC 35-5 (Chemistry of Synthetic High Polymers)  
Section cross-reference(s): 38, 42  
IT **Coating materials**  
(antifriction; low surface energy polyisocyanates containing allophanate and isocyanurate groups for one-or two-component coating compns.)  
IT **Polyurethanes, preparation**  
RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
(polyester-, **fluorine** containing; low surface energy **polyisocyanates** containing allophanate and **isocyanurate** groups for one-or two-component coating compns.)  
REFERENCE COUNT: 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L113 ANSWER 6 OF 45 HCAPLUS COPYRIGHT 2005 ACS on STN  
ACCESSION NUMBER: 1998:747487 HCAPLUS  
DOCUMENT NUMBER: 130:53740  
TITLE: Polyesters for hard but flexible coatings on vehicle and building exteriors and useful as compatibility modifiers for acrylic and fluororesins and polyisocyanate hardeners, and manufacture thereof  
INVENTOR(S): Enomoto, Susumu; Sasahara, Toshiaki; Konishi, Noboru  
PATENT ASSIGNEE(S): Nippon Polyurethane Industry Co., Ltd., Japan  
SOURCE: Jpn. Kokai Tokkyo Koho, 7 pp.  
CODEN: JKXXAF  
DOCUMENT TYPE: Patent  
LANGUAGE: Japanese  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 10306252	A2	19981117	JP 1997-132872	19970507 <--
			JP 1997-132872	19970507 <--

PRIORITY APPLN. INFO.:  
ED Entered STN: 25 Nov 1998  
AB The title polyesters (OH value 150-250, acid value 0.5-5.0) are formed by condensation of (A) aromatic dicarboxylic acid, (B) alicyclic dicarboxylic acid, (C) C3-10 triols, (D) C6-15 alicyclic diol, and (E) C2-10 aliphatic diol at molar ratios A:B = 20-50:80-50, C:(D + E) = 35-75:65-25, and D:E = 5-30:95-70. A polyester was prepared from phthalic anhydride, hexahydrophthalic anhydride, trimethylolpropane, cyclohexane-1,4-dimethanol, and 1,6-hexanediol and used together with Coronate HX and TiO<sub>2</sub>

in solvent-based coatings.

IC ICM C09D167-00  
ICS C08G063-199  
CC 42-10 (Coatings, Inks, and Related Products)  
IT **Polyurethanes, uses**  
RL: IMF (Industrial manufacture); POF (Polymer in formulation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses) (polyester-, acrylic; polyesters for hard but flexible coatings on vehicle and building exteriors and useful as compatibility modifiers for acrylic and **fluororesins** and **polyisocyanate** hardeners, and manufacture thereof)  
IT **Coating materials**  
(polyesters for **hard** but flexible coatings on vehicle and building exteriors and useful as compatibility modifiers for acrylic and fluororesins and polyisocyanate hardeners, and manufacture thereof)

L113 ANSWER 7 OF 45 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 1998:184349 HCAPLUS  
DOCUMENT NUMBER: 128:257853  
TITLE: Storage-stable unsaturated urethanes, ureas, and amides  
INVENTOR(S): Matsuhira, Shinya; Misu, Naoaki; Futakami, YUto; Kihara, Muneo  
PATENT ASSIGNEE(S): Showa Denko K. K., Japan  
SOURCE: Jpn. Kokai Tokkyo Koho, 5 pp.  
CODEN: JKXXAF  
DOCUMENT TYPE: Patent  
LANGUAGE: Japanese  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 10077328	A2	19980324	JP 1996-252393	19960902 <--
PRIORITY APPLN. INFO.:			JP 1996-252393	19960902 <--

ED Entered STN: 28 Mar 1998  
AB Stable compds. are obtained by reacting active H compds. with unsatd. isocyanates (hydrolyzable Cl content  $\leq 300$  ppm). Thus, 165 g polyethylene glycol (Mn 660) was reacted with 77.5 g methacryloyloxyethyl isocyanate [hydrolyzable Cl content (JIS K-1556) 134 ppm] to give an unsatd. urethane compound showing little change for a week at room temperature. Then, the compound was applied to a glass sheet and irradiated with UV to give a cured film.  
IC ICM C08G018-81  
CC 35-8 (Chemistry of Synthetic High Polymers)  
Section cross-reference(s): 39, 42  
IT **Fluoropolymers, preparation**  
RL: IMF (Industrial manufacture); PREP (Preparation)  
(polyether-polyimide-, reaction products with methacryloyl **isocyanate**; storage-stable unsatd. **urethanes**, ureas, and amides)  
IT **Coating materials**  
(storage-stable; storage-stable unsatd. urethanes, ureas, and amides)

L113 ANSWER 8 OF 45 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 1998:191823 HCAPLUS  
DOCUMENT NUMBER: 128:231641  
TITLE: New polyisocyanates containing perfluoropolyether macromers for moisture curing applications

AUTHOR(S): Scicchitano, M.; Turri, S.; Marchetti, R.  
 CORPORATE SOURCE: Centro Ricerche e Sviluppo AUSIMONT S.p.A., Milan,  
 20021, Italy  
 SOURCE: Double Liaison--Physique, Chimie & Economie des  
 Peintures & Adhesifs (1998), Volume Date  
 1997, 44(500), 28-31  
 CODEN: DLPAEL; ISSN: 1166-4398  
 PUBLISHER: IDEXPO  
 DOCUMENT TYPE: Journal  
 LANGUAGE: English  
 ED Entered STN: 02 Apr 1998  
 AB New polyisocyanate resins are obtained by prepolymerization of perfluoropolyether  
 (PFPE) diols with the cyclic trimers of hexamethylene diisocyanate (HDI)  
 and isophorone diisocyanate (IPDI). Clear as well as pigmented  
 polyurea-urethane crosslinked coatings can be obtained by moisture curing  
 of the isocyanate terminated resins. Thermal transitions and mechanical  
 properties are determined showing the formation of biphasic materials. Contact  
 angle and XPS measurements indicate the formation of predominantly  
 fluorinated, low energy surfaces. The peculiar surface composition of such  
 coatings may be related to the excellent antigraffiti, stain release and  
 self cleaning performances observed during outdoor exposure tests.  
 CC 42-10 (Coatings, Inks, and Related Products)  
 IT **Polyurethanes, uses**  
**Polyurethanes, uses**  
 RL: PRP (Properties); TEM (Technical or engineered material use); USES  
 (Uses)  
 (fluorine-containing, coatings; polyisocyanates containing  
 perfluoropolyoxyalkylene macromers for moisture-curing coating  
 applications)  
 IT **Coating materials**  
 (polyisocyanates containing perfluoropolyoxyalkylene macromers for  
 moisture-curing coating applications)  
 IT **Fluoropolymers, uses**  
**Fluoropolymers, uses**  
 RL: PRP (Properties); TEM (Technical or engineered material use); USES  
 (Uses)  
 (polyurethane-, coatings; polyisocyanates containing  
 perfluoropolyoxyalkylene macromers for moisture-curing coating  
 applications)  
 REFERENCE COUNT: 6 THERE ARE 6 CITED REFERENCES AVAILABLE FOR THIS  
 RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT  
 L113 ANSWER 9 OF 45 HCAPLUS COPYRIGHT 2005 ACS on STN  
 ACCESSION NUMBER: 1997:772768 HCAPLUS  
 DOCUMENT NUMBER: 128:49474  
 TITLE: Characteristics of blocked isocyanates. 1  
 AUTHOR(S): Suzuki, Shinzi  
 CORPORATE SOURCE: Kaseihin Gijutsu Senta, Asahi Kasei Kogyo K. K.,  
 Kawasaki, 210, Japan  
 SOURCE: Kotingu Jiho (1997), 208, 1-6  
 CODEN: KOJIEB; ISSN: 0289-503X  
 PUBLISHER: Asahi Kasei Kogyo K.K.  
 DOCUMENT TYPE: Journal  
 LANGUAGE: Japanese  
 ED Entered STN: 11 Dec 1997  
 AB Blocked isocyanates of biuret, isocyanurate, elastic, polyfunctional, and  
 low-temperature-curing types were prepared as curing agents for one-component  
 urethane coatings. The isocyanurate types showed a good compatibility  
 with various polyols, including F-containing ones. The low-temperature-curing  
 and

polyfunctional types were curable at 90°-120°. Cured products showed yellowing resistance during baking (140° for 30 min). The elastic types gave films showing elongation at break 100% at 20°. Formulations containing the isocyanurate and polyfunctional types showed satisfactory storage stability at 20°-50° for >4 wk.

CC 42-10 (Coatings, Inks, and Related Products)

IT **Coating materials**

(compatibility of various blocked isocyanate curing agent with polyol in urethane coatings)

IT **Fluoropolymers, uses**

**Fluoropolymers, uses**

RL: PRP (Properties); TEM (Technical or engineered material use); USES (Uses)

(polyether-, hydroxy-containing; compatibility of various blocked isocyanate curing agent with polyol in urethane coatings)

L113 ANSWER 10 OF 45 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 1997:172301 HCAPLUS

DOCUMENT NUMBER: 126:173099

TITLE: **Soilproof** surface treating agents for outdoor materials, process therewith and treated articles therefrom

INVENTOR(S): Mori, Haruhiko; Wada, Susumu; Senda, Akira; Nagato, Masaru; Kunimasa, Keiko

PATENT ASSIGNEE(S): Daikin Ind Ltd, Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 12 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 08337755	A2	19961224	JP 1995-143757	19950609 <--
			JP 1995-143757	19950609 <--

PRIORITY APPLN. INFO.:

ED Entered STN: 14 Mar 1997

AB Title agents comprise 100 parts RO[SiO(OR)<sub>2</sub>]<sub>n</sub>R (R = C1-20 hydrocarbyl, optionally containing O and/or N atoms; n = 1-10) or their hydrolyzates, 1-100 parts (oligomeric) polymers containing CONR<sub>1</sub> units (R<sub>1</sub> = C1-20 alkyl or C6-20 aryl) and/or their precursor groups, 0-500 parts solvents, 0-20 parts catalysts, and 0-50 parts silane couplers XaSiY<sub>4</sub>-a (X = reactive unhydrolyzable group; Y = hydrolyzable organic group; a = 1-3). A treated Al panel was sprayed with a composition containing TiO<sub>2</sub>, Zeffle GK 500, and

Takenate D

140N, cured, sprayed with a mixture of AcOBu 100, Me silicate 51 100, and Desmodur BL 4165 5 g to a <15-μm thickness, and cured at 80° over 40 min to form a panel showing good soil resistance and appearance over 6 mo at outdoor.

IC ICM C09D183-06

ICS C09D183-08; C09D201-00

CC 42-10 (Coatings, Inks, and Related Products)

ST **soilproof** tetraalkoxysilane polyisocyanate coating outdoor aluminum; polyurethane tetraalkoxysilane antisoiling coating outdoor aluminum

IT **Polyurethanes, uses**

RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)

((fluoro); tetraalkoxysilane/**polyisocyanate** (or polyurethane)-based antisoiling coatings for outdoor materials)  
 IT **Coating materials**  
 (antisoiling; tetraalkoxysilane/polyisocyanate (or polyurethane)-based coatings for outdoor materials)

L113 ANSWER 11 OF 45 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 1997:164553 HCAPLUS

DOCUMENT NUMBER: 126:158848

TITLE: Active energy beam-curable coating compositions containing hydroxy-substituted fluoroolefin polymers, acrylic monomers, and polyisocyanates

INVENTOR(S): Miura, Ryuichi; Kodama, Shunichi

PATENT ASSIGNEE(S): Asahi Glass Co Ltd, Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 6 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 08319455	A2	19961203	JP 1995-128580	19950526 <--
PRIORITY APPLN. INFO.:			JP 1995-128580	19950526 <--

ED Entered STN: 10 Mar 1997

AB Title compns. giving weather-resistant cured films contain reaction products prepared by linking OH- and F( $\geq 5\%$ )-containing fluoroolefin polymers with OH-containing (meth)acrylate monomers through diisocyanates and/or triisocyanates having NCO groups with different reactivity. Thus, after 12 parts 2-hydroxyethyl acrylate was added dropwise into 22 parts LDI (2,6-diisocyanatocaproic acid Me ester) at 40° for 5 h with stirring under dried N and then treated with a solution of 186 parts 50:17:5:8 (mol) chlorotrifluoroethylene-cyclohexyl vinyl ether-Et vinyl ether-hydroxybutyl vinyl ether copolymer (OH value 40) in 220 parts toluene (I) at 60° for 5 h under stirring, 220 parts a 1:1 mixture of 1,6-hexanediol diacrylate and trimethylolpropane triacrylate was added and I was vacuum distilled off to obtain a coating composition, in 100 parts of which

3 parts Darocure 1173 was dispersed, applied to an Al plate at a 0.01-mm thickness, and cured by UV irradiation for 20 s to give a film showing gloss retention  $\geq 80\%$  after 3000 h in the sunshine weatherometer test.

IC ICM C09D175-04

ICS C09D175-04; C09D127-12; C08G018-65; C08G018-67; C08G018-73

CC 42-10 (Coatings, Inks, and Related Products)

IT **Polyurethanes, uses**

RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)

(acrylic, **fluorine**-containing, hydroxy-substituted; active energy-curable coatings containing hydroxy-substituted **fluoroolefin** polymers, hydroxy-substituted (meth)acrylic monomers, and **polyisocyanates**)

IT **Fluoropolymers, uses**

RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)

(acrylic-**polyurethane**-, hydroxy-substituted; active energy-curable coatings containing hydroxy-substituted fluoroolefin polymers, hydroxy-substituted (meth)acrylic monomers, and **polyisocyanates**)

- IT **Polyurethanes, uses**  
 RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
 (fluorine-containing, hydroxy-substituted; active energy-curable coatings containing hydroxy-substituted **fluoroolefin** polymers, hydroxy-substituted (meth)acrylic monomers, and **polyisocyanates**)
- IT **Fluoropolymers, uses**  
 RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
 (polyurethane-, hydroxy-substituted; active energy-curable coatings containing hydroxy-substituted fluoroolefin polymers, hydroxy-substituted (meth)acrylic monomers, and **polyisocyanates**)
- IT **Coating materials**  
 (solvent-resistant; active energy-curable coatings containing hydroxy-substituted fluoroolefin polymers, hydroxy-substituted (meth)acrylic monomers, polyisocyanates)
- IT **Coating materials**  
 (weather-resistant; active energy-curable coatings containing hydroxy-substituted fluoroolefin polymers, hydroxy-substituted (meth)acrylic monomers, polyisocyanates)

L113 ANSWER 12 OF 45 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 1997:15007 HCAPLUS  
 DOCUMENT NUMBER: 126:48437  
 TITLE: Fluorine-containing resin compositions for coatings  
 INVENTOR(S): Nakayama, Mitsuhiro; Nakayama, Masahiro  
 PATENT ASSIGNEE(S): Japan  
 SOURCE: Jpn. Kokai Tokkyo Koho, 10 pp.  
 CODEN: JKXXAF  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 08269156	A2	19961015	JP 1995-73819	19950330 <--
JP 3178774	B2	20010625		

PRIORITY APPLN. INFO.: JP 1995-73819 19950330 <--

ED Entered STN: 11 Jan 1997

AB Resin compns. useful for abrasion-, light-, and chemical-resistant coatings comprise F-containing polyols as main agents, optionally containing electroconductive additives, and polyisocyanate-type curing agents containing  $\geq 60\%$  polyol-modified hexamethylene diisocyanate. Thus, tetrafluoroethylene-vinyl ether copolymer (Zeffle GK 510) 100, Lublon L 2 20, an OH-containing silicone resin (KR 211) 8, and carbon black (Printex XE 2) 10 parts were mixed, dispersed, blended with a curing agent (Duranate E 405), coated on a substrate, and cured at 110° for 2 h to give a test piece showing breaking elongation 120%, good **water repellency**, pencil hardness 2H, and good impact resistance.

IC ICM C08G018-50

ICS C08G018-10; C08G018-62; C08G018-73; C08K003-00; C08L075-04; C09D175-04

CC 42-10 (Coatings, Inks, and Related Products)

ST fluoropolymer polyol polyisocyanate resin coating; **water resistance** coating polyisocyanate curing agent; chem resistance coating polyurethane compn; electroconductive additive coating polyol



polyisocyanate

IT **Electric conductors**  
(carbon black; in resin compns. prepared from F-containing polyols and polyisocyanate curing agents for **coatings**)

IT **Polyurethanes, uses**  
**Polyurethanes, uses**  
RL: IMF (Industrial manufacture); POF (Polymer in formulation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses) (fluorine-containing; resin compns. prepared from F-containing polyols and polyisocyanate curing agents for coatings)

IT **Coating materials**  
**Coating materials**  
(impact- and water-resistant; resin compns. prepared from F-containing polyols and polyisocyanate curing agents for coatings)

IT **Fluoropolymers, uses**  
**Fluoropolymers, uses**  
RL: IMF (Industrial manufacture); POF (Polymer in formulation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses) (polyurethane-; resin compns. prepared from F-containing polyols and polyisocyanate curing agents for coatings)

L113 ANSWER 13 OF 45 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 1996:531438 HCAPLUS

DOCUMENT NUMBER: 125:168890

TITLE: Low surface energy polyisocyanates and their use in one- or two-component coating compositions

INVENTOR(S): Yeske, Philip E.; Squiller, Edward P.; Slack, William E.

PATENT ASSIGNEE(S): Bayer A.-G., USA

SOURCE: Eur. Pat. Appl., 14 pp.

CODEN: EPXXDW

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 719809	A1	19960703	EP 1995-119331	19951207 <--
EP 719809	B1	20010314		
R: DE, ES, FR, GB, IT, NL				
US 5541281	A	19960730	US 1994-359777	19941220 <--
CA 2163590	AA	19960621	CA 1995-2163590	19951123 <--
ES 2154709	T3	20010416	ES 1995-119331	19951207 <--
PRIORITY APPLN. INFO.:			US 1994-359777	A 19941220 <--

ED Entered STN: 06 Sep 1996

AB A polyisocyanate mixture (i) having an NCO content 5-35% and prepared from an organic diisocyanate, (ii) containing <5% isocyanurate groups (calculated as N3C3O3, mol. weight 126), (iii) containing allophanate groups in an amount such that there are more equivalent of allophanate groups than urethane groups and (iv) containing F (calculated as F, atomic weight 19) in an amount 0.001-50%, based on solids, wherein F is incorporated with compds. containing  $\geq 2$  C atoms,  $\geq 1$  hydroxyl groups and  $\geq 1$  F atoms is prepared and used optionally in blocked form, as an isocyanate component in title coating compns. Organic diisocyanate is reacted with a compound containing  $\geq 2$  C atoms,  $\geq 1$

OH groups, and  $\geq 1$  F atoms, a catalyst is added, some allophanate groups formed, the reaction is terminated, and optionally unreacted diisocyanate is removed. Thus Galden TX monoalc. was stirred with Desmodur N 3300 at ratio 1:3 at 90° for 4 h, Sn octoate was added dropwise over 2 h to form allophanate groups, the reaction terminated with benzoyl chloride, and the polyisocyanate (F 1.0%) having surface tension 27.9 dyne/cm was bended with Desmophen A LS 2945 at NCO:OH equivalent ratio 1.1:1, diluted with solvent mixture, cast on cold rolled steel, and cured 2 wk at 70°F and relative humidity 55% to give coatings having pendulum hardness 219.8, surface energy 21.6, and MEK double rubs >200.

IC ICM C08G018-80

CC 35-2 (Chemistry of Synthetic High Polymers)

Section cross-reference(s): 42

IT **Urethane polymers, preparation**

RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)

(allophanate and **fluorine** containing **polyisocyanates** for; low surface energy **polyisocyanates** for one- or two-component coating compns.)

IT **Coating materials**

(low surface energy polyisocyanates for one- or two-component coating compns.)

L113 ANSWER 14 OF 45 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 1996:290029 HCAPLUS

DOCUMENT NUMBER: 124:319816

TITLE: Low-surface-energy polyisocyanates and their use in one- or two-component coating compositions

INVENTOR(S): Yeske, Philip E.; Squiller, Edward P.; Slack, William E.

PATENT ASSIGNEE(S): Bayer A.-G., USA

SOURCE: Eur. Pat. Appl., 17 pp.

CODEN: EPXXDW

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 702041	A1	19960320	EP 1995-113753	19950901 <--
EP 702041	B1	20011212		
R: BE, DE, ES, FR, GB, IT, NL				
US 5576411	A	19961119	US 1994-306553	19940914 <--
CA 2156244	AA	19960315	CA 1995-2156244	19950816 <--
ES 2169098	T3	20020701	ES 1995-113753	19950901 <--
JP 08104728	A2	19960423	JP 1995-259519	19950913 <--
PRIORITY APPLN. INFO.:			US 1994-306553	A 19940914 <--

ED Entered STN: 16 May 1996

AB The present invention is directed to a polyisocyanate mixture (i) having an NCO content of 5 to 35% by weight and prepared from an organic diisocyanate, (ii)

containing at least 1% by weight of isocyanurate groups (calculated as N3, C3, 126), (iii) containing allophanate groups in an amount such that there are more equivalent of allophanate groups than urethane groups, and (i.v.) containing fluorine (calculated as F, AW19) in an amount of 0.001 to 50% by weight,

wherein

the preceding percentages are based on the solids content of the

- polyisocyanate mixture, excluding any unreacted organic diisocyanate, and wherein fluorine is incorporated by reacting an isocyanate group with a compound containing two or more carbon atoms, one or more hydroxyl groups and one or more fluorine atoms to form urethane groups and converting a sufficient amount of these urethane groups to allophanate groups to satisfy the requirements of (iii), provided that the polyisocyanate mixture contains sufficient allophanate groups to ensure that the polyisocyanate mixture remains stable and homogeneous in storage for 3 mo at 25°C. This polyisocyanate mixture is useful in the manufacture of coatings with low surface energy. A typical polyisocyanate mixture is manufactured by reaction of 100 g HDI with 4 parts perfluorinated ethylene oxide-end-capped polypropylene oxide monoether in the presence of trimethylbenzylammonium hydroxide at 90°.
- IC ICM C08G018-79  
ICS C08G018-78; C07D251-34; C09D175-06
- CC 42-10 (Coatings, Inks, and Related Products)
- IT **Coating materials**  
(fluoropolyisocyanates containing isocyanurate and allophanate groups having good storage stability for manufacture of polyurethane coatings with low surface energy)
- IT **Urethane polymers, uses**  
RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
(acrylic, **fluorine**-containing, **fluoropolyisocyanates** containing **isocyanurate** and allophanate groups having good storage stability for manufacture of polyurethane coatings with low surface energy)
- IT **Urethane polymers, uses**  
RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
(acrylic-polyoxyalkylene-, block, **fluorine**-containing, **fluoropolyisocyanates** containing **isocyanurate** and allophanate groups having good storage stability for manufacture of polyurethane coatings with low surface energy)
- IT **Fluoropolymers**  
RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
(acrylic-**polyoxyalkylene-polyurethane**-, block, **fluoropolyisocyanates** containing **isocyanurate** and allophanate groups having good storage stability for manufacture of **polyurethane** coatings with low surface energy)
- IT **Fluoropolymers**  
RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
(acrylic-**polyurethane**-, **fluoropolyisocyanates** containing **isocyanurate** and allophanate groups having good storage stability for manufacture of **polyurethane** coatings with low surface energy)

L113 ANSWER 15 OF 45 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 1995:856592 HCAPLUS

DOCUMENT NUMBER: 124:90479

TITLE: Self-curable fluoro polyurethane coating compositions

INVENTOR(S): Kodama, Shunichi; Washida, Hiroshi

PATENT ASSIGNEE(S): Asahi Glass Co Ltd, Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 6 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 07196983	A2	19950801	JP 1993-335606	19931228 <--
PRIORITY APPLN. INFO.:			JP 1993-335606	19931228 <--

ED Entered STN: 14 Oct 1995

AB The compns., showing improved pigment dispersibility, weatherability, and chemical resistance, contain F-containing polymers comprising fluoroolefin units,

OH-containing vinyl units, and blocked isocyanate-substituted vinyl units. Thus, a copolymer of  $\omega$ -hydroxybutyl vinyl ether-HDI-Me Et ketoxime adduct 37.8, hydroxybutyl vinyl ether 10.4, cyclohexyl vinyl ether 15.0, and chlorotrifluoroethylene 34.6 parts was diluted with xylene and mixed with 12% Quinacridone Red (I) and applied to an Al plate and cured at 180° for 30 min to give a coating showing good dispersion of I.

IC ICM C09D175-04

ICS C09D127-12

ICA C08F214-18; C08F226-00; C08G018-62; C08G018-80

CC 42-10 (Coatings, Inks, and Related Products)

Section cross-reference(s): 56

IT **Coating materials**

(self-curable coatings with good pigment dispersibility containing fluoropolymers from fluoroolefins, hydroxy vinyl compds., and blocked isocyanato vinyl compds.)

IT **Urethane polymers, uses**

RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)

(**fluorine**-containing, self-curable coatings with good pigment dispersibility containing **fluoropolymers** from **fluoroolefins**, hydroxy vinyl compds., and blocked **isocyanato** vinyl compds.)

IT **Fluoropolymers**

RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)

(**polyurethane**-, self-curable coatings with good pigment dispersibility containing fluoropolymers from fluoroolefins, hydroxy vinyl compds., and blocked **isocyanato** vinyl compds.)

L113 ANSWER 16 OF 45 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 1995:708879 HCAPLUS

DOCUMENT NUMBER: 123:260027

TITLE: Room temperature-curable multifunctional isocyanate-containing coating compositions

INVENTOR(S): Nishio, Tatsuo; Marumoto, Etsuzo; Iida, Akihito; Inukai, Hiroshi

PATENT ASSIGNEE(S): Toa Gosei Kk, Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 7 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 07102211	A2	19950418	JP 1993-271193	19931005 <--

JP 3104775

B2

20001030

PRIORITY APPLN. INFO.:

JP 1993-271193

19931005 &lt;--

ED Entered STN: 29 Jul 1995

AB The title compns. with good weatherability and antifouling property comprise (i) (a) solvent-soluble fluorocopolymers containing 3-20 mol%

OH-containing

monomers and (b) multifunctional isocyanates at weight ratio  $\leq 1.0$  which are dissolved in (ii) organic solvent solns. of silane-modified fluorocopolymers prepared by adding (c) 5-100 parts of silanes containing  $\geq 2$  hydrolyzable groups or their lower condensation products to (d) 100 parts (based on polymers) organic solvent solns. of soluble

fluorocopolymers

containing 10-20 mol% OH-containing monomer units. Thus, tetraethoxysilane 13, methyltriethoxysilane 10, and p-toluenesulfonic acid 0.01 g were added dropwise to 25 g 50:32:18 (mol%) chlorotrifluoroethylene (I)-vinyl propionate (II)-hydroxyethyl crotonate (III) copolymer with Tg 35° dissolved in xylene-Bu cellosolve (IV) mixture, 3.9 g H<sub>2</sub>O and 3 g IV were added dropwise successively, and stirred to give a 33%-solid transparent solution (B-1). A dispersion (MB-1) comprising 45:33:11:11 (mol%) I-II-VeoVa 9-III copolymer 60% xylene solution 80, CR 97 (TiO<sub>2</sub>) 30, Disperbyk 101 0.6, and xylene 45 g was prepared. A coating comprising MB-1 30, B-1 4.5, Coronate HX (HMDI) 2, dibutyltin dilaurate 0.1% solution 0.4, and xylene 4 g gave good weatherability to chromated Al plate.

IC ICM C09D175-04

ICS C09D175-04

CC 42-10 (Coatings, Inks, and Related Products)

IT **Coating materials**

(room temperature-curable coatings. containing isocyanates, fluoropolymers,

and

silane-modified fluoropolymers with weatherability)

IT **Fluoropolymers**

RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)

(polyurethane-siloxane-, room temperature-curable coatings. containing **isocyanates**, fluoropolymers, and silane-modified fluoropolymers with weatherability)

IT **Urethane polymers, uses**

RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)

(siloxane-, **fluorine**-containing, room temperature-curable coatings. containing **isocyanates**, **fluoropolymers**, and silane-modified **fluoropolymers** with weatherability)

L113 ANSWER 17 OF 45 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 1995:424938 HCAPLUS

DOCUMENT NUMBER: 123:146813

TITLE: Manufacture of compounds containing one blocked isocyanate group and one free isocyanate group

INVENTOR(S): Hirata, Fumiaki; Masui, Masakazu; Morita, Yasushi

PATENT ASSIGNEE(S): Takeda Chemical Industries Ltd, Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 7 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.

KIND

DATE

APPLICATION NO.

DATE

JP 07002753 A2 19950106 JP 1993-146268 19930617 <--  
 PRIORITY APPLN. INFO.: JP 1993-146268 19930617 <--  
 ED Entered STN: 18 Mar 1995  
 AB The title compds., containing  $\leq 10\%$  compds. with 2 blocked isocyanate groups and  $\leq 1\%$  unreacted diisocyanates, are prepared by reacting a diisocyanate with a blocking compound. Reacting 400 g HDI with 50 g Me Et ketoxime at  $\leq 40^\circ$  and removing HDI in a thin-film evaporator gave OCN(CH<sub>2</sub>)<sub>6</sub>NHCO<sub>2</sub>N:CETMe containing 8.2% diblocked HDI and 0.2% HDI. The product (36 g) was mixed with 378 g Takelac UA 906 in the presence of dibutyltin dilaurate at  $60^\circ$  for 2 h to give a 1-liquid acrylic-polyurethane composition which gave baked coatings showing pencil hardness H and high impact resistance.  
 IC ICM C07C265-14  
 ICS C07C263-18; C08G018-80  
 CC 42-3 (Coatings, Inks, and Related Products)  
 Section cross-reference(s): 35, 37  
 IT **Coating materials**  
 (acrylic-urethane; half-blocked diisocyanates as crosslinkers for)  
 IT **Urethane polymers, uses**  
 RL: POF (Polymer in formulation); USES (Uses)  
 (fluorine-containing, half-blocked **diisocyanates** as crosslinkers for)  
 IT Acrylic polymers, uses  
**Fluoropolymers**  
 RL: POF (Polymer in formulation); USES (Uses)  
 (polyurethane-, half-blocked **diisocyanates** as crosslinkers for)

L113 ANSWER 18 OF 45 HCAPLUS COPYRIGHT 2005 ACS on STN  
 ACCESSION NUMBER: 1996:102520 HCAPLUS  
 DOCUMENT NUMBER: 124:148885  
 TITLE: Stable aqueous dispersions of hydroxy-containing fluoropolymers for coatings  
 INVENTOR(S): Kappler, Patrick; Perillon, Jean-Luc; Savary, Catherine  
 PATENT ASSIGNEE(S): Elf Atochem S.A., Fr.  
 SOURCE: Eur. Pat. Appl., 16 pp.  
 CODEN: EPXXDW  
 DOCUMENT TYPE: Patent  
 LANGUAGE: French  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 685499	A1	19951206	EP 1995-401258	19950531 <--
EP 685499	B1	19971008		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LI, LU, NL, PT, SE				
FR 2720750	A1	19951208	FR 1994-6682	19940601 <--
FR 2720750	B1	19960719		
CA 2150512	AA	19951202	CA 1995-2150512	19950530 <--
AU 9520376	A1	19951207	AU 1995-20376	19950530 <--
AU 692851	B2	19980618		
US 6448328	B1	20020910	US 1995-453149	19950530 <--
FI 9502642	A	19951202	FI 1995-2642	19950531 <--
NO 9502146	A	19951204	NO 1995-2146	19950531 <--
AT 159035	E	19971015	AT 1995-401258	19950531 <--
ES 2109785	T3	19980116	ES 1995-401258	19950531 <--
JP 08059748	A2	19960305	JP 1995-158443	19950601 <--

CN 1117979 A 19960306 CN 1995-106651 19950601 <--  
 PRIORITY APPLN. INFO.: FR 1994-6682 A 19940601 <--  
 ED Entered STN: 20 Feb 1996  
 AB Stable aqueous dispersions of copolymers are prepared by copolymerizing H<sub>2</sub>C:CF<sub>2</sub> and/or FCH:CF<sub>2</sub> with F<sub>2</sub>C:CF<sub>2</sub>, ≥1 monomer containing OH and allyl groups, and, optionally, other monomers such as vinyl monomers containing no OH groups. The dispersions are used, optionally with dispersions of copolymers of Me methacrylate and other alkyl (meth)acrylates, in the preparation of lacquers and paints. A dispersion of a copolymer of H<sub>2</sub>C:CF<sub>2</sub>, F<sub>2</sub>C:CF<sub>2</sub>, and H<sub>2</sub>C:CHCH<sub>2</sub>OCH<sub>2</sub>CH(OH)CH<sub>2</sub>OH was prepared and used with an HDI-based polyisocyanate in a composition which gave a crosslinked coating showing good resistance to MEK.  
 IC ICM C08F214-18  
 ICS C08L027-12  
 CC 42-10 (Coatings, Inks, and Related Products)  
 IT **Coating materials**  
 (aqueous dispersions containing isocyanates and hydroxy-containing fluoropolymers for preparation of crosslinked)  
 IT **Urethane polymers, uses**  
 RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
 (coatings; aqueous dispersions containing **isocyanates** and hydroxy-containing **fluoropolymers** for preparation of)

L113 ANSWER 19 OF 45 HCAPLUS COPYRIGHT 2005 ACS on STN  
 ACCESSION NUMBER: 1995:559910 HCAPLUS  
 Correction of: 1994:705581  
 DOCUMENT NUMBER: 122:293596  
 Correction of: 121:305581  
 TITLE: Scratch-resistant silicone-coated steel panels and their manufacture  
 INVENTOR(S): Minami, Naotaka; Hiraoka, Masaji; Izumi, Keiji; Uchida, Yukio  
 PATENT ASSIGNEE(S): Nisshin Steel Co. Ltd., Japan  
 SOURCE: Jpn. Kokai Tokkyo Koho, 6 pp.  
 CODEN: JKXXAF  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 06238817	A2	19940830	JP 1993-50209	19930216 <--
PRIORITY APPLN. INFO.:			JP 1993-50209	19930216 <--

ED Entered STN: 19 May 1995  
 AB Title panels are prepared by coating steel panels with compns. containing methyltrialkoxysilane condensate sols, 10-50% isocyanates, 5-20% fluoropolymers, and 5-20% pigments with average diameter of 0.01-5 μm to a thickness of 5-10 μm and baking at 100-300°. A steel panel was coated with a composition containing HMDI (10%)-modified methyltrialkoxysilane condensate, 5% PVDF, and 10% 0.5-μm SiO<sub>2</sub>, and baked at 150° to form a 5.1-μm film with good 180° flexibility and scratch resistance (sandpaper number 600-1200, 10 N).  
 IC ICM B32B015-08  
 CC 42-10 (Coatings, Inks, and Related Products)  
 Section cross-reference(s): 55  
 IT **Coating materials**

(scratch-resistant, pigment- and fluororesin-containing  
polyisocyanate-modified silicone compns. for steel panels)

IT **Urethane polymers, uses**

RL: POF (Polymer in formulation); TEM (Technical or engineered material  
use); USES (Uses)

(siloxane-, pigment- and **fluororesin**-containing  
**polyisocyanate**-modified silicone compns. for steel panels)

L113 ANSWER 20 OF 45 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 1993:605614 HCAPLUS

DOCUMENT NUMBER: 119:205614

TITLE: Blocked isocyanate group-containing resins for  
polyurethane powder coatings

INVENTOR(S): Sugimoto, Kenji; Saka, Kazuki

PATENT ASSIGNEE(S): Asahi Chemical Ind, Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 7 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 05186565	A2	19930727	JP 1992-2784	19920110 <--
PRIORITY APPLN. INFO.:			JP 1992-2784	19920110 <--

ED Entered STN: 13 Nov 1993

AB The title resins with good melt fluidity are obtained by treating 100 mol parts diisocyanates with 5-30 mol parts blocking agents, removing unreacted diisocyanates by distillation, and reaction of the resulting half-blocked diisocyanates with active H-containing resins [glass transition temperature (Tg)  $\geq 35^\circ$ , melt viscosity  $\leq 50,000$  P at  $120^\circ$ ] at NCO/active H equivalent ratio 0.4-1.0. Thus, dropwise addition of 1 mol Me Et ketoxime to 5 mol hexamethylene diisocyanate at  $30^\circ$  over 2 h, stirring 1 h, and distillation gave 235 g mixture containing 87.8% half-blocked diisocyanate and 12.2% diblocked diisocyanate. Then, a mixture (NCO/OH equiv ratio 0.4) containing the blocked isocyanate, Finedic M 8010 (polyester polyol; OH value 27 mgKOH/g, viscosity 7600 P, Tg  $61^\circ$ ), Me<sub>2</sub>CO, and dibutyltin laurate was shaken at  $50^\circ$  for 10 h and dried to give powdered resin with good blocking resistance, melt viscosity 4800 P, Tg  $55^\circ$ , gel fraction  $\geq 80\%$ , and good coating lightness.

IC ICM C08G018-80

ICS C08G018-65

ICA C09D005-03

CC 42-10 (Coatings, Inks, and Related Products)

IT **Urethane polymers, uses**

RL: USES (Uses)

(**fluorine**-containing, powder coatings, manufacture of, from blocked  
**isocyanate** group-containing resins)

IT **Fluoropolymers**

RL: USES (Uses)

(**polyurethane**-, powder coatings, manufacture of, from blocked  
**isocyanate** group-containing resins)

IT **Coating materials**

(powder, polyurethanes, manufacture of, from blocked isocyanate  
group-containing  
resins)

L113 ANSWER 21 OF 45 HCAPLUS COPYRIGHT 2005 ACS on STN



ACCESSION NUMBER: 1992:450925 HCAPLUS  
DOCUMENT NUMBER: 117:50925  
TITLE: Fluoropolymer-polyisocyanurate polyurethane  
topcoatings  
INVENTOR(S): Tanaka, Hiroo; Ishikawa, Noboru; Okada, Katsuhiko  
PATENT ASSIGNEE(S): Dainippon Inki Kagaku Kogyo K. K., Japan  
SOURCE: Jpn. Kokai Tokkyo Koho, 13 pp.  
CODEN: JKXXAF  
DOCUMENT TYPE: Patent  
LANGUAGE: Japanese  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 04061969	A2	19920227	JP 1990-169550	19900627 <--
JP 2982228	B2	19991122		

PRIORITY APPLN. INFO.: JP 1990-169550 19900627 <--  
ED Entered STN: 08 Aug 1992  
AB Scratch-resistant coatings contain fluoropolymers containing  $\geq 2$  OH groups and diisocyanate-C10-40 diol copolymers containing isocyanurate rings. Thus, a primed steel panel was sprayed with a solution of Bu<sub>2</sub>Sn(OAc)<sub>2</sub>, vinyl p-tert-butylbenzoate-Veova 9-4-hydroxybutyl vinyl ether-C2ClF<sub>3</sub> copolymer, and Desmodur H-12-hydroxystearyl alc. copolymer, and baked to give a film with gloss retention after 100 rubbings with 5% aqueous cleaner under 2 kg load 87%.  
IC ICM B05D007-24  
ICS B05D001-36; C08G018-62; C09D175-04  
CC 42-10 (Coatings, Inks, and Related Products)  
IT **Fluoropolymers**  
RL: TEM (Technical or engineered material use); USES (Uses)  
(coatings, containing **polyisocyanurate-polyurethanes**, scratch-resistant)  
IT **Urethane polymers, uses**  
RL: TEM (Technical or engineered material use); USES (Uses)  
(**polyisocyanurate-**, coatings, containing **fluoropolymers**, scratch-resistant)  
IT **Coating materials**  
(scratch-resistant, fluoropolymers and polyisocyanurate-polyurethanes as)

L113 ANSWER 22 OF 45 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 1985:7830 HCAPLUS  
DOCUMENT NUMBER: 102:7830  
TITLE: Mold-release agents  
PATENT ASSIGNEE(S): Asahi Glass Co., Ltd., Japan  
SOURCE: Jpn. Kokai Tokkyo Koho, 4 pp.  
CODEN: JKXXAF  
DOCUMENT TYPE: Patent  
LANGUAGE: Japanese  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 59105097	A2	19840618	JP 1982-213256	19821207 <--

PRIORITY APPLN. INFO.: JP 1982-213256 19821207 <--  
ED Entered STN: 12 Jan 1985  
AB Durable release coatings on metal molds for plastics and rubbers comprise

thermosetting resins and reaction products of F-containing compds. RZR1 [R = C1-20 polyfluoroalkyl; Z = CO, SO<sub>2</sub>, (CH<sub>2</sub>)<sub>n</sub>; n = 1-4; R1 = OH, NHR<sub>2</sub>; R2 = H, alkyl, alkoxy] with isocyanates. Thus, I [88439-27-4] 10, C12FCCCC1F2 90, 40% Almatex L-1044 [93586-16-4] (thermosetting acrylic polymer) in toluene 12.5, and MeCCl<sub>3</sub> 87.5 parts were mixed, applied to an Al mold, and dried 30 min at 65°. When a polyurethane composition was injected into the mold and cured at 65° for 3 min, the molding cycle could be repeated 26 times before mold cleaning and recoating were required, vs. 1 cycle using a silicone release coating.

IC C10M007-28; C10M007-30

CC 38-2 (Plastics Fabrication and Uses)

IT **Urethane polymers, uses and miscellaneous**

RL: USES (Uses)

(mold-release agents for, containing **fluoroalkyl isocyanate** derivs.)

IT **Coating materials**

(release, thermosetting, containing fluoroalkyl isocyanate derivs., for molds)

=> d iall abeq tech abex 23-37

YOU HAVE REQUESTED DATA FROM FILE 'WPIX, HCAPLUS, USPATFULL, WSCA, RAPRA, SCISEARCH' - CONTINUE? (Y)/N:y

L113 ANSWER 23 OF 45 WPIX COPYRIGHT 2005 THE THOMSON CORP on STN

ACCESSION NUMBER: 1999-024192 [02] WPIX

CROSS REFERENCE: 1999-024191 [02]; 1999-024193 [02]

DOC. NO. CPI: C1999-007450

TITLE: **Fluorochemical** composition comprising

**urethane** having a **fluorochemical** oligomer - and a hydrophilic segment, useful to impart **oil and water repellency** to a fibrous substrate to improve stain release properties.

DERWENT CLASS: A11 A14 A23 A25 A87 F06

INVENTOR(S): ALLEWAERT, K E M; DAMS, R F; VANDER ELST, P J; ALLEWAERT, K E M L A; DAMS, R J

PATENT ASSIGNEE(S): (MINN) MINNESOTA MINING & MFG CO; (MINN) 3M INNOVATIVE PROPERTIES CO

COUNTRY COUNT: 83

PATENT INFORMATION:

PATENT NO	KIND DATE	WEEK	LA	PG MAIN IPC
WO 9851724	A1 19981119 (199902)*	EN	33	C08G018-28<--
RW: AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW NL				
OA PT SD SE SZ UG ZW				
W: AL AM AT AU AZ BA BB BG BR BY CA CH CN CU CZ DE DK EE ES FI GB GE				
GH GM GW HU ID IL IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MD MG				
MK MN MW MX NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT UA UG				
US UZ VN YU ZW				
AU 9874876	A 19981208 (199916)			C08G018-28<--
EP 981561	A1 20000301 (200016)	EN		C08G018-28<--
R: BE CH DE FR GB IT LI NL				
BR 9808768	A 20000801 (200043)			C08G018-28<--
US 6239247	B1 20010529 (200132)			C08G018-48<--
EP 981561	B1 20010808 (200146)	EN		C08G018-28<--
R: BE CH DE FR GB IT LI NL				

DE 69801323 E 20010913 (200161) C08G018-28<--  
 JP 2001525874 W 20011211 (200204) 37 C08G018-38<--

## APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE	
WO 9851724	A1	WO 1998-US9866	19980514	<--
AU 9874876	A	AU 1998-74876	19980514	<--
EP 981561	A1	EP 1998-922293	19980514	<--
		WO 1998-US9866	19980514	<--
BR 9808768	A	BR 1998-8768	19980514	<--
		WO 1998-US9866	19980514	<--
US 6239247	B1	WO 1998-US9866	19980514	<--
		US 1999-381865	19990924	<--
EP 981561	B1	EP 1998-922293	19980514	<--
		WO 1998-US9866	19980514	<--
DE 69801323	E	DE 1998-601323	19980514	<--
		EP 1998-922293	19980514	<--
		WO 1998-US9866	19980514	<--
JP 2001525874	W	JP 1998-549547	19980514	<--
		WO 1998-US9866	19980514	<--

## FILING DETAILS:

PATENT NO	KIND	PATENT NO
AU 9874876	A Based on	WO 9851724
EP 981561	A1 Based on	WO 9851724
BR 9808768	A Based on	WO 9851724
US 6239247	B1 Based on	WO 9851724
EP 981561	B1 Based on	WO 9851724
DE 69801323	E Based on	EP 981561
	Based on	WO 9851724
JP 2001525874	W Based on	WO 9851724

PRIORITY APPLN. INFO: **EP 1997-201388**  
**19970514**

## INT. PATENT CLASSIF.:

MAIN: **C08G018-28; C08G018-38;**  
**C08G018-48**

SECONDARY: **C08G018-62; C08L075-04; D06M013-428;**  
**D06M015-576**

## BASIC ABSTRACT:

WO 9851724 A UPAB: 20020117

A fluorochemical composition (I) comprising a urethane is prepared by reacting: (A) a fluorochemical oligomer of formula (1) (B) a monofunctional compound capable of reacting with an isocyanate and comprising a poly(oxyalkylene) group (C) an isocyanate blocking agent or fluorine free oligomer and (D) an isocyanate reactive compound other than (A), (C) or (B) with (E) a diisocyanate or triisocyanate where 33-67% of the isocyanate groups in (E) are reacted with (A), 33-67% of the isocyanate groups in (E) are reacted with (B), 0-33% of the isocyanate groups in (E) are reacted with (C) and 0-10% of the isocyanate groups in (E) are reacted with (D)

Also claimed are: (i) a method of treating a substrate by contacting the substrate with the composition (I) and (ii) the substrate coated in at least part of its surface with (I).

MfmMn-Q1-T1 (1)

where MfmMn = a fluorochemical oligomer comprising m units derived from a fluorinated monomer and a unit derived from a fluorine free monomer. m = 2-40 n = 0-20 T1 = OH or NH2. Q1 and T1 together represent an organic residue obtained by removing a hydrogen atom from a chain transfer agent that is functionalised with T1.

USE - The composition (I) is useful to impart stain release properties to a substrate (claimed).

ADVANTAGE - (I) imparts good stain and/or oil and water repellency to fabric substrates and has low manufacturing cost, easy emulsificability and good performance at low levels of application.

Dwg.0/0

FILE SEGMENT: CPI  
FIELD AVAILABILITY: AB  
MANUAL CODES: CPI: A05-G03; A12-G03; F03-C02

L113 ANSWER 24 OF 45 WPIX COPYRIGHT 2005 THE THOMSON CORP on STN  
ACCESSION NUMBER: 1999-024191 [02] WPIX  
CROSS REFERENCE: 1999-024192 [02]; 1999-024193 [02]  
DOC. NO. CPI: C1999-007449  
TITLE: Fluorochemical composition comprising a polyurethane having a fluorochemical oligomer - and a hydrophilic segment, useful to impart oil and water repellency to a fibrous substrate to improve stain release properties.  
DERWENT CLASS: A11 A14 A23 A25 A87 F06  
INVENTOR(S): ALLEWAERT, K E M; VANDER ELST, P J; ALLEWAERT, K E M L A; AUDENAERT, F A  
PATENT ASSIGNEE(S): (MINN) MINNESOTA MINING & MFG CO; (MINN) 3M INNOVATIVE PROPERTIES CO  
COUNTRY COUNT: 83  
PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG	MAIN	IPC
WO 9851723	A1	19981119	(199902)*	EN	31	C08G018-28<--	
RW: AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW NL							
OA PT SD SE SZ UG ZW							
W: AL AM AT AU AZ BA BB BG BR BY CA CH CN CU CZ DE DK EE ES FI GB GE							
GH GM GW HU ID IL IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MD MG							
MK MN MW MX NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT UA UG							
US UZ VN YU ZW							
AU 9874855	A	19981208	(199916)			C08G018-28<--	
EP 981560	A1	20000301	(200016)	EN		C08G018-28<--	
R: BE CH DE FR GB IT LI NL							
BR 9808778	A	20000801	(200043)			C08G018-28<--	
CN 1255929	A	20000607	(200046)			C08G018-28<--	
CN 1255930	A	20000607	(200046)			C08G018-28<--	
CN 1255931	A	20000607	(200046)			C08G018-28<--	
US 6162369	A	20001219	(200102)			D06M013-00	
US 6224782	B1	20010501	(200126)			C08G018-28<--	
KR 2001012509	A	20010215	(200154)			C08G018-28<--	
KR 2001012510	A	20010215	(200154)			C08G018-28<--	
KR 2001012512	A	20010215	(200154)			C08G018-28<--	
EP 981560	B1	20011107	(200169)	EN		C08G018-28<--	
R: BE CH DE FR GB IT LI NL							
JP 2001525871	W	20011211	(200204)		31	C08G018-38<--	
DE 69802395	E	20011213	(200205)			C08G018-28<--	

## APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE	
WO 9851723	A1	WO 1998-US9797	19980514	<--
AU 9874855	A	AU 1998-74855	19980514	<--
EP 981560	A1	EP 1998-922268	19980514	<--
		WO 1998-US9797	19980514	<--
BR 9808778	A	BR 1998-8778	19980514	<--
		WO 1998-US9797	19980514	<--
CN 1255929	A	CN 1998-805050	19980514	<--
CN 1255930	A	CN 1998-805052	19980514	<--
CN 1255931	A	CN 1998-805094	19980514	<--
US 6162369	A	WO 1998-US9797	19980514	<--
		US 1999-381863	19990924	<--
US 6224782	B1	WO 1998-US9872	19980514	<--
		US 1999-381864	19990924	<--
KR 2001012509	A	KR 1999-710464	19991112	<--
KR 2001012510	A	KR 1999-710465	19991112	<--
KR 2001012512	A	KR 1999-710467	19991112	<--
EP 981560	B1	EP 1998-922268	19980514	<--
		WO 1998-US9797	19980514	<--
JP 2001525871	W	JP 1998-549513	19980514	<--
		WO 1998-US9797	19980514	<--
DE 69802395	E	DE 1998-602395	19980514	<--
		EP 1998-922268	19980514	<--
		WO 1998-US9797	19980514	<--

## FILING DETAILS:

PATENT NO	KIND	PATENT NO
AU 9874855	A Based on	WO 9851723
EP 981560	A1 Based on	WO 9851723
BR 9808778	A Based on	WO 9851723
US 6162369	A Based on	WO 9851723
US 6224782	B1 Based on	WO 9714842
EP 981560	B1 Based on	WO 9851723
JP 2001525871	W Based on	WO 9851723
DE 69802395	E Based on	EP 981560
	Based on	WO 9851723

PRIORITY APPLN. INFO: **EP 1997-201388**  
**19970514**

## INT. PATENT CLASSIF.:

MAIN: **C08G018-28; C08G018-38; D06M013-00**  
SECONDARY: **C08G018-48; C08G018-62;**  
**C08L075-04; C09K003-00; D06M013-428; D06M015-576**

## BASIC ABSTRACT:

WO 9851723 A UPAB: 20020123  
A fluorochemical composition (I) comprising a polyurethane is prepared by reacting (A) a fluoro-chemical oligomer of formula (1) (B) a difunctional compound capable of reaction with an isocyanate and (C) a monofunctional compound capable of reaction with an isocyanate and comprising a poly(oxyalkylene) group with (D) a triisocyanate. Also claimed are: (i) a method of treating a substrate by contacting the substrate with the composition (I) and (ii) the substrate coated in at least part of its surface with (I).

MfmMn - Q1 - T1 (1)

MfmMn = a fluorochemical oligomer comprising m units derived from a fluorinated monomer and a unit derived from a fluorine free monomer. m = 2-40 n = 0-20 T1 = OH or NH2. Q1 and T1 together represent an organic residue obtained by removing a hydrogen atom from a chain transfer agent that is functionalised with T1.

USE - The composition (I) is useful to impart stain release properties to a substrate (claimed).

ADVANTAGE - (I) imparts good stain and/or oil and water repellency to fabric substrates and has low manufacturing cost, easy emulsificability and good performance at low levels of application.

Dwg.0/0

FILE SEGMENT: CPI  
FIELD AVAILABILITY: AB  
MANUAL CODES: CPI: A05-G03; A12-G03; F03-C02

L113 ANSWER 25 OF 45 WPIX COPYRIGHT 2005 THE THOMSON CORP on STN  
ACCESSION NUMBER: 1998-446172 [38] WPIX  
DOC. NO. CPI: C1998-135334  
TITLE: Coating composition used in paints, clear coating and stains - comprising the addition of a poly fluoro-urethane to an alkyd or urethane resin prior to curing.  
DERWENT CLASS: A25 A82 G02  
INVENTOR(S): KIRCHNER, J R  
PATENT ASSIGNEE(S): (DUPO) DU PONT DE NEMOURS & CO E I  
COUNTRY COUNT: 22  
PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG	MAIN	IPC
US 5789513	A	19980804	(199838)*		15	C08L067-06<--	
WO 9838232	A1	19980903	(199841)	EN		C08G018-67<--	
RW: AT BE CH DE DK ES FI FR GB GR IE IT LU MC NL PT SE							
W: AU CA JP KR							
AU 9861742	A	19980918	(199908)			C08G018-67<--	
EP 963392	A1	19991215	(200003)	EN		C08G018-67<--	
R: BE DE DK FR GB IT NL							
KR 2000075670	A	20001226	(200134)			C08G018-67<--	
AU 737113	B	20010809	(200152)			C08G018-67<--	
JP 2001513137	W	20010828	(200156)		51	C09D175-04<--	
EP 963392	B1	20020123	(200207)	EN		C08G018-67<--	
R: BE DE DK FR GB IT NL							
DE 69803555	E	20020314	(200226)			C08G018-67<--	

#### APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
US 5789513	A	US 1997-807855	19970226 <--
WO 9838232	A1	WO 1998-US3138	19980218 <--
AU 9861742	A	AU 1998-61742	19980218 <--
EP 963392	A1	EP 1998-906545	19980218 <--
		WO 1998-US3138	19980218 <--
KR 2000075670	A	WO 1998-US3138	19980218 <--
		KR 1999-707736	19990825 <--
AU 737113	B	AU 1998-61742	19980218 <--
JP 2001513137	W	JP 1998-537716	19980218 <--
		WO 1998-US3138	19980218 <--

EP 963392	B1	EP 1998-906545	19980218	<--
		WO 1998-US3138	19980218	<--
DE 69803555	E	DE 1998-603555	19980218	<--
		EP 1998-906545	19980218	<--
		WO 1998-US3138	19980218	<--

## FILING DETAILS:

PATENT NO	KIND	PATENT NO
AU 9861742	A Based on	WO 9838232
EP 963392	A1 Based on	WO 9838232
KR 2000075670	A Based on	WO 9838232
AU 737113	B Previous Publ. Based on	AU 9861742 WO 9838232
JP 2001513137	W Based on	WO 9838232
EP 963392	B1 Based on	WO 9838232
DE 69803555	E Based on Based on	EP 963392 WO 9838232

PRIORITY APPLN. INFO: **US 1997-807855**  
**19970226**

## INT. PATENT CLASSIF.:

MAIN: **C08G018-67**; C08L067-06; **C09D175-04**  
SECONDARY: C07C269-02; **C08G018-38**; C08K005-16; C08L067-08;  
**C08L075-04**; **C08L075-14**

## BASIC ABSTRACT:

US 5789513 A UPAB: 19980923  
A coating composition comprising an alkyd or urethane resin containing unsaturation provided by aliphatic or drying oil residue and polyfluorourethane of formula II: (Rf-X-O-CO-NH)m-A-(NH-CO-O-R) (p-m) II, Rf = 2-20C linear or branched fluorocarbon; X = -(CH2)n-, -(CH2)gSOz(CH2)t- or -SOzN(R1)CH2CH2- where: n = 1-20; g and t = independently 1-3; z = 1-2; and R1 = 1-4C alkyl; A = aliphatic, cycloaliphatic, aromatic or heterocyclic radical; R = 3-20C linear, branched or cyclic aliphatic group containing at least one ethylenically unsaturated double bond and optionally at least one phenyl or phenyl substituted with 1-6C alkyl or halogen; p = 2 or 3; and m = 0.8-1.25 when p is 2, and m = from 1-(p-1) when p is greater than 2. Also claimed is a method of improving the **oil repellency** of the cured alkyl or urethane coating composition by adding to the resin of the invention an effective amount of polyfluorourethane of formula (II) prior to curing.

USE - The coating compositions are used as a paint, a clear coating or as a stain.

ADVANTAGE - The method of adding polyurethane to the composition prior to curing gives improved **oil repellency** (claimed), wash **resistance** and cleanability.

Dwg. 0/0

FILE SEGMENT: CPI  
FIELD AVAILABILITY: AB  
MANUAL CODES: CPI: A05-D; A05-E08; **A05-G**; A08-C07; A09-A08;  
A12-B01H; **A12-B01K**; G02-A02E;  
**G02-A02H**; G02-A03; G02-A05G

L113 ANSWER 26 OF 45 WPIX COPYRIGHT 2005 THE THOMSON CORP on STN  
ACCESSION NUMBER: 1998-489568 [42] WPIX  
DOC. NO. CPI: C1998-147615  
TITLE: Curable compositions - contains isocyanato

group-terminated polyurethane prepolymer and a  
 photosetting fluorine-containing copolymer, etc..  
 DERWENT CLASS: A14 A25 A82 G02 G04  
 PATENT ASSIGNEE(S): (ASAG) ASAHI GLASS CO LTD  
 COUNTRY COUNT: 1  
 PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG	MAIN	IPC
JP 10212405	A	19980811	(199842)*		9	C08L075-04	<--

## APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
JP 10212405	A	JP 1997-17081	19970130 <--

PRIORITY APPLN. INFO: **JP 1997-17081**  
**19970130**

## INT. PATENT CLASSIF.:

MAIN: **C08L075-04**

SECONDARY: **C08G018-10; C08L027-12**

## BASIC ABSTRACT:

JP 10212405 A UPAB: 19981021

A curable compsn. containing (A)an isocyanato gp.-terminated polyurethane prepolymer and (B)a photosetting fluorine-containing copolymer containing (1)20-70mol% polymer units based on fluoroolefin, (2)1-80mol% of polymer units bearing a photosetting functional gp. with a total of polymer units (1) plus polymer units (2)=at least 30mol% and (3)0-70mol% of an arbitrary polymer units other than polymer units (1) and polymer units (2) per total polymer units is new.

Also claimed are two pack curable compsns. consisting of a principal component of (A) and a curative containing an active hydrogen cpd. with the principal component and/or the curative containing (B).

USE - The curable compsns. are useful for sealing and **waterproof** materials and coatings.

ADVANTAGE - The curable compsns. can give cured compsns. with excellent long durability and improved weather resistance, especially surface crack resistance and surface stain resistance.

Dwg.0/0

FILE SEGMENT: CPI

FIELD AVAILABILITY: AB

MANUAL CODES: CPI: A04-E10; **A05-G01B**; A07-A04E; A11-C02B;  
 A12-B01F; **A12-B01K**; A12-R08; G02-A02D;  
**G02-A02H**; G04-B02

L113 ANSWER 27 OF 45 WPIX COPYRIGHT 2005 THE THOMSON CORP on STN

ACCESSION NUMBER: 1997-226177 [20] WPIX

DOC. NO. CPI: C1997-072513

TITLE: **Poly fluoro urethane**  
 additives for water-dispersed coating compsns. - reducing  
 swelling of wood substrates, providing soil  
**resistance and oil repellency**  
 , and improving cleanability.

DERWENT CLASS: A25 A82 F09 G02

INVENTOR(S): MAY, D D

PATENT ASSIGNEE(S): (DUPO) DU PONT DE NEMOURS & CO E I

COUNTRY COUNT: 25



## PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG	MAIN	IPC
WO 9712923	A1	19970410	(199720)*	EN	45	C08G018-28<--	
RW: AT BE CH DE DK ES FI FR GB GR IE IT LU MC NL PT SE							
W: AU CA JP KR MX							
AU 9673885	A	19970428	(199733)			C08G018-28<--	
EP 853638	A1	19980722	(199833)	EN		C08G018-28<--	
R: BE CH DE DK FR GB IT LI NL							
US 5827919	A	19981027	(199850)			C08J003-00<--	
JP 11513428	W	19991116	(200005)		49	C08G018-38<--	
MX 9802647	A1	19980801	(200014)			C08G018-28<--	
AU 718638	B	20000420	(200029)			C08G018-28<--	
KR 99064030	A	19990726	(200044)			C08G018-28<--	
EP 853638	B1	20010411	(200121)	EN		C08G018-28<--	
R: BE CH DE DK FR GB IT LI NL							
TW 413687	A	20001201	(200124)			B01F017-52	
DE 69612505	E	20010517	(200135)			C08G018-28<--	
MX 201532	B	20010424	(200223)			C08G018-28<--	
KR 431683	B	20040818	(200481)			C08G018-28<--	

## APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE	
WO 9712923	A1	WO 1996-US15887	19961004	<--
AU 9673885	A	AU 1996-73885	19961004	<--
EP 853638	A1	EP 1996-936173	19961004	<--
		WO 1996-US15887	19961004	<--
US 5827919	A	Provisional	US 1995-4912P	19951006 <--
			US 1996-695105	19960807 <--
JP 11513428	W	WO 1996-US15887	19961004	<--
		JP 1997-514431	19961004	<--
MX 9802647	A1	MX 1998-2647	19980403	<--
AU 718638	B	AU 1996-73885	19961004	<--
KR 99064030	A	WO 1996-US15887	19961004	<--
		KR 1998-702508	19980404	<--
EP 853638	B1	EP 1996-936173	19961004	<--
		WO 1996-US15887	19961004	<--
TW 413687	A	TW 1996-110441	19960828	<--
DE 69612505	E	DE 1996-612505	19961004	<--
		EP 1996-936173	19961004	<--
		WO 1996-US15887	19961004	<--
MX 201532	B	MX 1998-2647	19980403	<--
KR 431683	B	WO 1996-US15887	19961004	<--
		KR 1998-702508	19980404	<--

## FILING DETAILS:

PATENT NO	KIND	PATENT NO
AU 9673885	A	Based on WO 9712923
EP 853638	A1	Based on WO 9712923
JP 11513428	W	Based on WO 9712923
AU 718638	B	Previous Publ. AU 9673885
		Based on WO 9712923
KR 99064030	A	Based on WO 9712923
EP 853638	B1	Based on WO 9712923

DE 69612505	E	Based on	EP 853638
		Based on	WO 9712923
KR 431683	B	Previous Publ.	KR 99064030
		Based on	WO 9712923

PRIORITY APPLN. INFO: **US 1996-695105**  
**19960807; US 1995-4912P**  
**19951006**

REFERENCE PATENTS: 1.Jnl.Ref; EP 435641; JP 05247451; WO 9301349; WO 9317165

INT. PATENT CLASSIF.:

MAIN: B01F017-52; **C08G018-28; C08G018-38;**  
C08J003-00

SECONDARY: B05D003-02; **C08G018-00; C08K003-20;**  
**C08L075-00; C09D007-12; C09D175-08**

BASIC ABSTRACT:

WO 9712923 A UPAB: 19970516

A polyfluorourethane cpd. comprises the reaction prod. of (a) at least one diisocyanate, (b) at least one fluorochemical cpd. containing at least one Zerewitinoff hydrogen in an amount sufficient to react with 5-80% of the isocyanate gps. in the diisocyanate, (c) at least one cpd. of formula R10-(R2)k-YH (I) in an amount sufficient to react with 5-80% of the isocyanate gps. in the diisocyanate, and opt. (d) water in an amount sufficient to react with 5-60% of the isocyanate gps. in the diisocyanate. R10 = 1-18C alkyl, 1-18C -alkenyl, or 1-18C -alkenoyl; R2 = -CnH2n- opt. end-capped with -[OCH2C(R4)H]p-, -(OCH2C(CH2Cl)H)p- or -C(R5)(R6)(OCH2C[CH2Cl]H)p-; R4, R5 and R6 = H or 1-6C alkyl; n = 0-12; p = 1-50; Y = O, S or N(R7); R7 = H or 1-6C alkyl; and k = 0 or 1.

Also claimed are (i) a polyfluorourethane cpd. comprising the reaction prod. of (a) at least one polyisocyanate or a mixture of polyisocyanates containing at least 3 isocyanate gps. per molecule, (b) at least one fluorochemical cpd. containing at least one Zerewitinoff hydrogen in an amount sufficient to react with 5-33% of the isocyanate gps. of the polyisocyanate, (c) at least one cpd. of formula (I) in an amount sufficient to react with 5-80% of the isocyanate gps. of the polyisocyanate, and opt. (d) water in an amount sufficient to react with 5-60% of the isocyanate gps. of the polyisocyanate; (ii) an improved water-dispersed coating compsn. comprising an emulsion, latex or suspension of a film-forming material dispersed in an aqueous medium inc. the above polyfluorourethane cpd.; and (iii) a dried coating comprising the above compsn.

USES - The polyfluorourethanes are used as additives in water-dispersed coating compsns. to reduce swelling of wood substrates, provide **oil repellency** and improve cleanability to the dried coating (all claimed). The polyfluorourethane may also provide soil resistance.

Dwg.0/0

FILE SEGMENT:	CPI
FIELD AVAILABILITY:	AB
MANUAL CODES:	CPI: <b>A05-G01B; A12-B09; F05-B; G02-A02H</b> ; G02-A05D

L113 ANSWER 28 OF 45	WPIX COPYRIGHT 2005 THE THOMSON CORP on STN
ACCESSION NUMBER:	1996-455420 [45] WPIX
DOC. NO. CPI:	C1996-142921
TITLE:	Fibre treating compsn. to improve <b>oil and water repellency</b> - comprises <b>polyalkoxylated polyurethane</b> having pendant <b>per fluoroalkyl</b> gps. and fluorochemical acrylate polymer.
DERWENT CLASS:	A14 A25 A87 F06

INVENTOR(S): HUBER, C D; YANDRASITS, M A  
 PATENT ASSIGNEE(S): (MINN) MINNESOTA MINING & MFG CO  
 COUNTRY COUNT: 7  
 PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG	MAIN	IPC
WO 9630584	A1	19961003	(199645)*	EN	59	D06M015-576	<--
W: AU CA CN JP KR MX US							
AU 9522018	A	19961016	(199706)			D06M015-576	<--
AU 686369	B	19980205	(199813)#			D06M015-576	<--
JP 10501591	W	19980210	(199816)		56	D06M015-576	<--
US 5725789	A	19980310	(199817)		18	D06M015-576	<--
KR 97703465	A	19970703	(199829)			D06M015-576	<--
MX 9605989	A1	19971201	(199936)			D06M015-576	<--
MX 190524	B	19981130	(200043)			D06M015-576	<--
CN 1149897	A	19970514	(200123)			D06M015-576	<--
CN 1077935	C	20020116	(200513)#			D06M015-576	

## APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE	
WO 9630584	A1	WO 1995-US3949	19950331	<--
AU 9522018	A	AU 1995-22018	19950331	<--
		WO 1995-US3949	19950331	<--
AU 686369	B	AU 1995-22018	19950331	<--
JP 10501591	W	WO 1995-US3949	19950331	<--
		JP 1996-529298	19950331	<--
US 5725789	A	WO 1995-US3949	19950331	<--
		US 1996-737686	19961113	<--
KR 97703465	A	WO 1995-US3949	19950331	<--
		KR 1996-706775	19961129	<--
MX 9605989	A1	MX 1996-5989	19961129	<--
MX 190524	B	MX 1996-5989	19961129	<--
CN 1149897	A	CN 1995-193390	19950331	<--
		WO 1995-US3949	19950331	<--
CN 1077935	C	CN 1995-193390	19950331	<--

## FILING DETAILS:

PATENT NO	KIND	PATENT NO
AU 9522018	A Based on	WO 9630584
AU 686369	B Previous Publ.	AU 9522018
	Based on	WO 9630584
JP 10501591	W Based on	WO 9630584
US 5725789	A Based on	WO 9630584
KR 97703465	A Based on	WO 9630584

PRIORITY APPLN. INFO: **WO 1995-US3949**  
**19950331**

REFERENCE PATENTS: EP 109171; WO 9301349

INT. PATENT CLASSIF.:

MAIN: D06M015-576

SECONDARY: C08L027-12; C08L033-16; **C08L075-00**;

**C08L075-04**; C09K003-00; D06M013-46; D06M015-277

ADDITIONAL: **C08G018-38**; C09D133-16

BASIC ABSTRACT:

WO 9630584 A UPAB: 19961111

A compsn. for treating fibre containing substrates to impart improved **oil and water repellency** comprises: (a) a **polyalkoxylated polyurethane** having pendant **perfluoroalkyl** gps. comprising the reaction prod. of an aliphatic or aromatic tri- or higher order isocyanate, a fluorinated alcohol, amine or mercaptan and a poly(oxyalkylene) diol or triol; and (b) a fluorochemical acrylate polymer comprising the reaction prod. of a fluorinated (meth)acrylate (b1), at least one alkyl(meth)acrylate (b2) and a polymerisable cationic emulsifier (b3) comprising a quaternary amine surfactant.

USE - The compsn. may be used on a variety of fibre-containing substrate such as fabrics and textile fibres comprising cotton, nylon, polyester, polyolefin, acrylic, acetate, leather or blends thereof and materials such as apparel, upholstery and carpet.

ADVANTAGE - The compsn. is water-based and may be applied to substrates and dried without thermal treatment i.e. at ambient conditions.

Dwg.0/0

FILE SEGMENT: CPI

FIELD AVAILABILITY: AB

MANUAL CODES: CPI: A04-E10D; **A05-G03**; A07-A04E; A12-G03;  
F03-C02; F03-C02A

ABEQ US 5725789 A UPAB: 19980428

A compsn. for treating fibre contg. substrates to impart improved **oil and water repellency** comprises: (a) a **polyalkoxylated polyurethane** having pendant **perfluoroalkyl** gps. comprising the reaction prod. of an aliphatic or aromatic tri- or higher order isocyanate, a fluorinated alcohol, amine or mercaptan and a poly(oxyalkylene) diol or triol; and (b) a fluorochemical acrylate polymer comprising the reaction prod. of a fluorinated (meth)acrylate (b1), at least one alkyl(meth)acrylate (b2) and a polymerisable cationic emulsifier (b3) comprising a quaternary amine surfactant.

USE - The compsn. may be used on a variety of fibre-contg. substrate such as fabrics and textile fibres comprising cotton, nylon, polyester, polyolefin, acrylic, acetate, leather or blends thereof and materials such as apparel, upholstery and carpet.

ADVANTAGE - The compsn. is water-based and may be applied to substrates and dried without thermal treatment i.e. at ambient conditions.

Dwg.0/0

L113 ANSWER 29 OF 45 WPIX COPYRIGHT 2005 THE THOMSON CORP on STN

ACCESSION NUMBER: 1996-051089 [06] WPIX

DOC. NO. NON-CPI: N1996-042830

DOC. NO. CPI: C1996-016771

TITLE: **Fluorinated poly urethane**

(s) useful as protective agents for wood, marble, stone, bricks, plaster, cement etc. - protecting against atmospheric and polluting agents and having superior **oil and water repellence** and durability.

DERWENT CLASS: A25 A82 E19 G02 L02 P63 Q43

INVENTOR(S): BURKS, S J; LENTI, D; LIN, S; TONELLI, C; LIN, S R

PATENT ASSIGNEE(S): (AUSY) AUSIMONT SPA

COUNTRY COUNT: 17

PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG	MAIN	IPC
-----							

EP 689908 A1 19960103 (199606)\* EN 13 B27K003-15<--  
 R: AT BE CH DE DK ES FR GB GR IE IT LI NL PT SE  
 CA 2151576 A 19951214 (199615) C08G018-83<--  
 JP 08053648 A 19960227 (199618) 8 C09D175-08<--  
 IT 1270213 B 19970429 (199745) B05C000-00<--  
 EP 689908 B1 20020918 (200269) EN B27K003-15  
 R: AT BE CH DE DK ES FR GB GR IE IT LI NL PT SE  
 DE 69528220 E 20021024 (200278) B27K003-15  
 JP 3526657 B2 20040517 (200433) 8 C09D175-08<--

## APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
EP 689908	A1	EP 1995-108724	19950607 <--
CA 2151576	A	CA 1995-2151576	19950612 <--
JP 08053648	A	JP 1995-143406	19950609 <--
IT 1270213	B	IT 1994-MI1225	19940613 <--
EP 689908	B1	EP 1995-108724	19950607 <--
DE 69528220	E	DE 1995-628220	19950607 <--
		EP 1995-108724	19950607 <--
JP 3526657	B2	JP 1995-143406	19950609 <--

## FILING DETAILS:

PATENT NO	KIND	PATENT NO
DE 69528220	E Based on	EP 689908
JP 3526657	B2 Previous Publ.	JP 08053648

PRIORITY APPLN. INFO: **IT 1994-MI1225****19940613**

REFERENCE PATENTS: EP 273449; EP 337312; EP 430266; EP 533159

## INT. PATENT CLASSIF.:

MAIN: B05C000-00; B27K003-15; **C08G018-83;****C09D175-08**SECONDARY: C04B041-48; **C08G018-08; C08G018-09;****C08G018-10; C08G018-50;****C08G018-65; C09D175-04; E04B001-62**

## BASIC ABSTRACT:

EP 689908 A UPAB: 19960610

The protection of wood, marble, stone, brick, plaster, cement and similar materials used partic. in building, from degradation caused by atmospheric and polluting agents, comprises applying a protective agent to the surface. The agent comprises aqueous dispersions of **fluorinated polyurethanes**, the **fluorinated** part deriving from fluoropolyether units, having high Mn and F content above 25 weight% and containing hydrophilic cationic or anionic side gps. on the polyurethane polymeric chain, separated from it by a bivalent alkylene radical (R)a selected from CR1R2 and Y(CR1R2)b; where Y = linking bivalent radical different from CR1R2, e.g. COO, CONH, OCONH, O; b = 0-20; R1 and R2 = H, 1-10 C aliphatic, 5-20 C cycloaliphatic, 6-20 C aromatic, the cyclic radicals opt. containing heteroatoms; and a = 1 - 20.

Also claimed are: (1) the preparation of the above polyurethanes by 2-step polymerisation comprising: (i) preparation of a fluorinated diisocyanate prepolymer in an organic solvent; (ii) partial chain extension with traditional chain extenders, e.g. low molecular weight (MW) diols or diamines, and ionomers containing (R)a; (iii) dispersion in water and salification with polymerisation completion by formation of ureidic bonds;

(iv) introduction of ionomers as in (I); (v) dispersion salification and polymerisation by chain extension in water with diamines; (vi) introduction of ionomer as in (I) and completing the chain extension in solvent, to obtain the polymer with the desired MW; and (vii) dispersion and salification in water of the resulting polymer; and (2) **fluorinated polyurethanes** having Mn of at least 9000.

ADVANTAGE - The protective agent exhibits superior **oil** and **water repellence** and high durability.

Dwg. 0/0

FILE SEGMENT: CPI GMPI  
 FIELD AVAILABILITY: AB  
 MANUAL CODES: CPI: **A05-G03**; A07-B04; A09-A08; A10-D; A12-B08;  
 A12-B09; G02-A05; G02-A05F; L02-D14Q

L113 ANSWER 30 OF 45 WPIX COPYRIGHT 2005 THE THOMSON CORP on STN  
 ACCESSION NUMBER: 1995-102116 [14] WPIX  
 DOC. NO. CPI: C1995-046879  
 TITLE: **Fluorine**-containing **polyurethane** coating  
 compsn. for application to e.g. wood, paper or rubber -  
 comprises fluorine-containing vinyl-modified poly ol, active  
 hydrogen cpd. and poly isocyanate, and has improved e.g.  
 weather, chemical and frictional resistances.  
 DERWENT CLASS: A25 A82 G02  
 PATENT ASSIGNEE(S): (NIPO) NIPPON POLYURETHANE KOGYO KK  
 COUNTRY COUNT: 1  
 PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG	MAIN	IPC
JP 07026204	A	19950127	(199514)*		5	C09D175-14	--

#### APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
JP 07026204	A	JP 1993-193045	19930709 <--

PRIORITY APPLN. INFO: **JP 1993-193045**  
**19930709**

INT. PATENT CLASSIF.:

MAIN: **C09D175-14**

ADDITIONAL: **C08G018-63**

BASIC ABSTRACT:

JP 07026204 A UPAB: 19950412

A **fluorine**-containing **polyurethane** coating compsn.  
 comprises (A) F-containing vinyl-modified polyol which is produced by reacting  
 100 pts. weight polyol having an unsatd. gp. in a molecule and an average  
 molecular weight (Mw) of 300-3000 with 5-200 pts. weight of a F-containing  
 vinyl monomer, (B) an active hydrogen cpd. and (C) polyisocyanate.

The F-containing vinyl monomer is perfluorohexylethylene,  
 2,2,3,3,3-pentafluoropropylmethacrylate or 2,2,3,3,3-  
 pentafluoropropylacrylate. Cpd. (B) is polyesterpolyol, alkyd resin,  
 ethyleneglycol or glycerol.

USE - The coating compsn. is applied to wood, metal, ceramics, glass,  
 paper, plastics, rubber, leather, etc..

ADVANTAGE - The coating compsn. has improved weather resistance,  
 corrosion resistance, chemical **resistance**, frictional.

**resistance, water-repellent** properties, stain-  
**proofing** properties and surface resistance.

Dwg.0/0

FILE SEGMENT: CPI  
FIELD AVAILABILITY: AB; GI  
MANUAL CODES: CPI: **A05-G; A12-B01K;**  
**G02-A02H; G02-A05C**

L113 ANSWER 31 OF 45 WPIX COPYRIGHT 2005 THE THOMSON CORP on STN  
ACCESSION NUMBER: 1991-312063 [43] WPIX  
DOC. NO. CPI: C1991-135115  
TITLE: Copolymer or graft copolymer with unsatd. per fluoroalkyl  
monomer - and unsatd. per fluoroalkyl-free monomer on  
dispersion of **polyurethane** containing **per**  
**fluoroalkyl** backbone, used as dressing.  
DERWENT CLASS: A14 A25 A87 F06 G02 P42  
INVENTOR(S): KORTMANN, W D I; PASSON, K; ROETTGER, J; SCHROER, W;  
KORTMANN, W; PASSON, K H; ROTTGER, J; SCHROER, W D;  
SCHROEER, W D  
PATENT ASSIGNEE(S): (FARB) BAYER AG  
COUNTRY COUNT: 7  
PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG	MAIN	IPC
EP 452774	A	19911023	(199143)*		19		<--
R: BE DE FR GB							
DE 4012630	A	19911024	(199144)				<--
CA 2040687	A	19911021	(199203)				<--
US 5115013	A	19920519	(199223)		9	C08F008-12	<--
JP 04227614	A	19920817	(199240)		12	C08F283-00	<--
EP 452774	A3	19920115	(199321)		19		<--
EP 452774	B1	19950308	(199514)	GE	22	C08F283-00	<--
R: BE DE FR GB							
DE 59104832	G	19950413	(199520)			C08F283-00	<--
JP 2909249	B2	19990623	(199930)		11	C08F283-00	<--

#### APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
EP 452774	A	EP 1991-105572	19910409 <--
DE 4012630	A	DE 1990-4012630	19900420 <--
US 5115013	A	US 1991-686321	19910412 <--
JP 04227614	A	JP 1991-115564	19910419 <--
EP 452774	A3	EP 1991-105572	19910409 <--
EP 452774	B1	EP 1991-105572	19910409 <--
DE 59104832	G	DE 1991-504832	19910409 <--
		EP 1991-105572	19910409 <--
JP 2909249	B2	JP 1991-115564	19910419 <--

#### FILING DETAILS:

PATENT NO	KIND	PATENT NO
DE 59104832	G Based on	EP 452774
JP 2909249	B2 Previous Publ.	JP 04227614

PRIORITY APPLN. INFO: **DE 1990-4012630**

**19900420**

REFERENCE PATENTS: NoSR.Pub; 2.Jnl.Ref; EP 127061; EP 156155; EP 157138; EP 339862; JP 02271803; JP 59228076; US 4935480; 02Jnl.Ref

## INT. PATENT CLASSIF.:

MAIN: C08F008-12; C08F283-00  
 SECONDARY: B05B007-02; B05D007-02; B05D007-26; C08F214-18;  
 C08F220-10; **C08G018-83**; C08J003-03; C08L027-12;  
 C08L033-14; C08L051-08; **C08L075-04**; C08L101-00;  
 C14C009-00; D06M015-25; D06M015-27; D06M101-06  
 ADDITIONAL: D06M015-576  
 INDEX: C08F220:24, C08F283-00; C08F214:18, C08F283-00

## BASIC ABSTRACT:

EP 452774 A UPAB: 19931114

Aqueous dispersions of copolymers and/or graft copolymers from (a) ethylenically unsatd. perfluoroalkyl monomers and (b) ethylenically unsatd. monomers free from perfluoroalkyl gps., are prepared by polymerisation in presence of aqueous, emulsifier-free polyurethane dispersions as graft backbone, based on (c) cpds. containing perfluoroalkyl gps. and with active H, (d) cpds. containing ionic and/or nonionic hydrophilic gps. and with active H, and (e) polyisocyanates.

USE/ADVANTAGE - Use of the dispersions for dressing natural or synthetic materials containing cellulose, polyesters, polyamides or polyacrylonitrile is claimed. Appln. includes oleophobic and hydrophobic dressings on textiles, carpets, leather, paper, fibres, filaments, thread, fleece and fabrics. The oleophilic action is better. Introduction of perfluoroalkyl chains improves the compatibility of the graft backbone and the grafted units. Distribution of the perfluoroalkyl chains in the latex particles is better. @(19pp Dwg.No.0/0)

0/0

FILE SEGMENT: CPI GMPI

FIELD AVAILABILITY: AB

MANUAL CODES: CPI: A04-E10D; A04-F06A; A04-F06E2; **A05-G01A**;  
**A05-G01E1**; A10-C03B; A12-B01F; A12-G03;  
 A12-S05S; F03-C02; F03-C02A; F05-A06B; G02-A05

ABEQ US 5115013 A UPAB: 19930928

An aq. dispersion of copolymers and/or graft copolymers composed of ethylenically unsatd. perfluoroalkyl monomers and perfluoroalkyl-free ethylenically unsatd. monomers are new. They are prepd. by polymerisation in the presence of aq., emulsifier-free polyurethane dispersions as the graft base. The polyurethanes contain the structural components (A), (B), (C) and (D). (A) are organic polyisocyanates, (B) are partial esters of fatty acids with polyols. (C) are cpds. contg. perfluoroalkyl gps. and active hydrogen atoms. (D) are cpds. contg. active H atoms and salt gps. or gps. which can be converted into salt gps. The polyurethane dispersion has a fluorine content of 5-30%, relative to the solid. The perfluoroalkyl monomers in the aq. dispersion have formula (I).

$CqF2q+1-Z-O-C(O)-C(R2)=CH2$

q = 4-12; R2 = H or methyl; Z = the grouping  $-(CH2)m-$ ;  $-O-(CH2)m-$  or  $-SO2-N(R1)-CH2-CH(R2)$  wherein m = 1-4; R1 = 1-4C alkyl gp.

USE/ADVANTAGE - These dispersions can be used for **oil repellent** and **water-repellent** finishing of textiles, carpets, leather and paper.

ABEQ EP 452774 B UPAB: 19950412

Aqueous dispersions of copolymers and/or graft copolymers composed of ethylenically unsaturated perfluoroalkyl monomers and perfluoroalkyl-free ethylenically unsaturated monomers, prepared by polymerisation in the presence of aqueous, emulsifier-free polyurethane dispersions as the graft base where the polyurethanes contain the following structural components incorporated therein: (A) organic polyisocyanates; (B) partial esters of



fatty acids with polyols; (C) compounds containing perfluoroalkyl groups and active hydrogen atoms; and (D) compounds containing active hydrogen atoms and salt groups or groups which can be converted into salt groups.  
Dwg.0/0

L113 ANSWER 32 OF 45 WPIX COPYRIGHT 2005 THE THOMSON CORP on STN  
 ACCESSION NUMBER: 1990-376231 [51] WPIX  
 DOC. NO. CPI: C1990-163944  
 TITLE: Water dispersible **polyurethane** containing **fluoroalkyl** gps. - obtd. from chain extending **polyurethane** prepolymer containing **fluoroalkyl** gps. to give coatings with high **water** and **oil repellency**.  
 DERWENT CLASS: A25 A82 G02  
 PATENT ASSIGNEE(S): (ICIL) IMPERIAL CHEM IND PLC  
 COUNTRY COUNT: 1  
 PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG	MAIN	IPC
AU 8933393	A	19901101	(199051)*				<--

## APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
AU 8933393	A	AU 1989-9864	19890426 <--

PRIORITY APPLN. INFO: **GB 1989-9864**  
**19890426**

INT. PATENT CLASSIF.: **C08G018-10**; C08L025-04; C08L027-04; C08L033-00;  
**C08L075-04**

## BASIC ABSTRACT:

AU 8933393 A UPAB: 19930928

An aqueous dispersion (I) of a water-dispersible polyurethane (II) which has pendent fluoroalkyl gps. is the prod. of chain extending, in aqueous medium, a water-dispersible, isocyanate-terminated polyurethane prepolymer (III) having pendent fluoroalkyl gps.

(III) is pref. obtd. by reacting a stoichiometric excess of an organic polyisocyanate with an isocyanate-reactive component (IV) containing a number of isocyanate-reactive gps. and at least one pendent fluoroalkyl gp. and also with a gpd. (V) containing a hydrophilic centre and at least two isocyanate or isocyanate reactive gps.

USE/ADVANTAGE - (I) provides a coating or film (claimed) having very low surface energy, high **water** and **oil repellency**, improved scratch **resistance** and improved lubricity.

0/0

FILE SEGMENT: CPI  
 FIELD AVAILABILITY: AB  
 MANUAL CODES: CPI: **A05-G01E1**; A07-B04; **A12-B01K**;  
**G02-A02H**; G02-A05

L113 ANSWER 33 OF 45 WPIX COPYRIGHT 2005 THE THOMSON CORP on STN  
 ACCESSION NUMBER: 1989-072684 [10] WPIX  
 DOC. NO. CPI: C1989-032275  
 TITLE: Polyurethane emulsion, for mfg. foamed prod. - prepared by emulsifying organic solution of **polyurethane**

containing **fluorocarbon** segments at main- and/or side-chains with water.  
 DERWENT CLASS: A25 A82 F08 G02  
 PATENT ASSIGNEE(S): (DAIC) DAINICHISEIKA COLOR & CHEM MFG; (UKIM-N) UKIMA GOSEI KK  
 COUNTRY COUNT: 1  
 PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG	MAIN	IPC
JP 01024823	A	19890126	(198910)*		9		<--
JP 08019325	B2	19960228	(199613)		8	C08L075-04	<--

## APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
JP 01024823	A	JP 1987-181653	19870721 <--
JP 08019325	B2	JP 1987-181653	19870721 <--

## FILING DETAILS:

PATENT NO	KIND	PATENT NO
JP 08019325	B2 Based on	JP 01024823

PRIORITY APPLN. INFO: **JP 1987-181653****19870721**INT. PATENT CLASSIF.: **C08L075-04**; C09G018-38MAIN: **C08L075-04**SECONDARY: **C08G018-38**; C09G018-38

## BASIC ABSTRACT:

JP 01024823 A UPAB: 19930923

Polyurethane emulsion is prepared by emulsifying organic solution of **polyurethane** containing **fluorocarbon** segments at main and/or side -chains with water. Pref. the polyurethane resin is prepared by reacting polyol, polyisocyanate and chain-extending agent, partly or fully replacing polyol, polyisocyanate or the agent by fluoro carbon cpd. containing reactive functional gp. (e.g. amine-, epoxy, OH, COOH or SH) pref. in organic solvent. The polyol is e.g. one containing terminal gps. and with mol. weight of 300-4000 (e.g. polyethylene adipate, succinate or sebacate, polyethylene propylene or polydiethylene-adipate, polybutylene sebacate, poly-epsilon-caprolactone, polyhexamethylene adipate, etc.). The polyisocyanate is e.g. opt. hydrogenated 4,4'-diphenylmethane, isophorone, 1,3- or 1,4-xylylene, 2,4- or 2,6-tolylene, 1,5-naphthalene, m- or p-phenylene diisocyanate, etc. The agent is e.g. ethylene, propylene or diethylene-glycol, 1,4-butane or 1,6-hexane-diol, methylene, tetramethylene, 1,2-propylene, trimethylene, decamethylene, isophorone or m-xylylenediamine, hydrazine or water. The fluorocarbon cpd. is H(CF<sub>2</sub>CF<sub>2</sub>)<sub>n</sub>CH<sub>2</sub>H (n is 1-7); CF<sub>3</sub>(CF<sub>2</sub>CF<sub>2</sub>)<sub>n</sub>CH<sub>2</sub>CH<sub>2</sub>OH (n is 1-10), CF<sub>3</sub>(CF<sub>2</sub>CF<sub>2</sub>)<sub>n</sub>COOH (n is 1-1), CF<sub>3</sub>(CF<sub>2</sub>CF<sub>2</sub>)<sub>n</sub>CH<sub>2</sub>CH<sub>2</sub>SH (n is 1-10), H(CF<sub>2</sub>CF<sub>2</sub>)<sub>k</sub>(CH<sub>2</sub>)<sub>m</sub>(OCH<sub>2</sub>CH(OH)CH<sub>2</sub>)<sub>n</sub>OH (k is 1-10, m is 1-10 and n is 1-3), F(CF<sub>2</sub>CF<sub>2</sub>)<sub>k</sub>(CH<sub>2</sub>)<sub>m</sub>(OCH<sub>2</sub>CH(OH)CH<sub>2</sub>)<sub>n</sub>OH (k is 1-10, m is 1-10 and n is 1-3). The solvent is ketone (e.g. methylethyl, methylisobutyl or diethyl-ketone, etc.) or carboxylate ester (e.g. methyl-, ethyl- or butyl formate or acetate, etc.).

USE/ADVANTAGE - Used for mfg. porous sheets with high surface smoothness, **water repellency**, anti-fouling property, washing fastness, mechanical properties, moisture transmission and good

texture.

0/0

FILE SEGMENT: CPI  
 FIELD AVAILABILITY: AB  
 MANUAL CODES: CPI: **A05-G01A**; A07-B04; F03-C02; F03-C02A;  
 G02-A05

L113 ANSWER 34 OF 45 WPIX COPYRIGHT 2005 THE THOMSON CORP on STN  
 ACCESSION NUMBER: 1989-221916 [31] WPIX  
 DOC. NO. CPI: C1989-098530  
 TITLE: Modified **polyurethane(s)** with **per**  
**fluoro** alkyl gps. - and polysiloxane blocks, for  
 textile treatment to impart **oil-and**  
**water-repellent** properties with soft  
 feel, smooth surface, etc..  
 DERWENT CLASS: A25 A82 A87 F06 G02  
 INVENTOR(S): BERNHEIM, M; LUEDEMANN, S; ROESSLER, E; SANDNER, B;  
 VOGEL, H; LUDEMANN, S; ROSSLER, E; VOGEL, H B  
 PATENT ASSIGNEE(S): (CHFP) PFERSEE CHEM GMBH; (CHFP) CHEM FAB PFERSEE GMBH;  
 (CIBA) CIBA GEIGY CORP; (CHFP) PFERSEE CHEMIE GMBH  
 COUNTRY COUNT: 13  
 PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG	MAIN	IPC
EP 325918	A	19890802	(198931)*	GE	12		<--
R: AT BE CH DE ES FR GB IT LI NL SE							
DE 3802633	A	19890803	(198932)				<--
JP 01225618	A	19890908	(198942)				<--
DE 3831452	A	19900322	(199013)				<--
US 5019428	A	19910528	(199124)				<--
US 5112930	A	19920512	(199222)		8	C08G077-04	<--
EP 325918	B1	19930331	(199313)	GE	16	C08G018-38	<--
R: AT BE CH DE ES FR GB IT LI NL SE							
DE 58903900	G	19930506	(199319)			C08G018-38	<--

## APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
EP 325918	A	EP 1989-100167	19890105 <--
DE 3802633	A	DE 1988-3802633	19880129 <--
JP 01225618	A	JP 1989-16494	19890127 <--
DE 3831452	A	DE 1988-3831452	19880916 <--
US 5019428	A	US 1989-301681	19890125 <--
US 5112930	A Div ex	US 1989-301681	19890125 <--
		US 1991-667721	19910311 <--
EP 325918	B1	EP 1989-100167	19890105 <--
DE 58903900	G	DE 1989-503900	19890105 <--
		EP 1989-100167	19890105 <--

## FILING DETAILS:

PATENT NO	KIND	PATENT NO
US 5112930	A Div ex	US 5019428
DE 58903900	G Based on	EP 325918

PRIORITY APPLN. INFO: **DE 1988-3802633**

19880129; DE

1988-3831452 19880916

REFERENCE PATENTS: 1.Jnl.Ref; A3...9011; EP 251334; EP 298364; JP 60081278;  
No-SR.Pub; US 4098742; US 4739013; WO 8602115

INT. PATENT CLASSIF.:

MAIN: C08G018-38; C08G077-04

SECONDARY: B05D003-02; C08G018-61; C08G077-42;

C08L075-04; D06M015-00

BASIC ABSTRACT:

EP 325918 A UPAB: 19931119

Modified, **perfluoroaliphatic** gp.-contg. **polyurethanes**

(I) are obtd. by reaction of oligo- or polyurethanes (II) containing free OH or NCO gps. and perfluoroaliphatic (Rf) gps. with polysiloxanes with at least 2 functional gps. (III) at elevated temperature opt. under inert gas and in the presence of a catalyst and in a carrier medium; the equivalent ratio of free OH (or NCO) gps. in (II) to the 2 or more functional gps. in (III) is such that all the reactive gps. in (II) undergo reaction.

Specifically (IIa) contains OH and Rf gps. and (IIIa) contains epoxy or COOH gps., or (IIb) contains NCO and Rf gps. and (IIIb) contain OH, es. carbinol, and amine/amide gps., and is pref. alpha,omega-functional; pref. (IIb) is obtd. by reaction of 1-18C (pref. 6-16C) perfluoroaliphatic diols with di/polyisocyanates in the equivalent ratio OH:NCO from 2:3 to 14:15 to form a block structure (II) and (III) are reacted at 30-180 (pref. 80-120) deg.C, in equivalent ratio such that there is a slight excess of polysiloxane functional gps., pref. in inert gas and with a catalyst or mixture

USE/ADVANTAGE - (I) are useful as organic solns. or aqueous dispersions for **water-** and **oil-repellent** treatment of fibres, especially textiles; aqueous dispersion contains u to 100 (pref.

30-50) weight%

of a 20-35% dispersion of emulsifiable polyethylene (PE wax) with density at least 0.92 (pref. 0.95-1.05) /cm<sup>3</sup>, acid number at least 5 (pref. 10-60) and saponification o. 15-80; other textile auxiliary materials are used with (I) in the normal way, pref. **water-repellent** aqueous dispersions of fluorocarbon cpds. containing at least 5 weight% F, pref. perfluoroaliphatic (co)polymers, especially pref. Asahi Guard AG310 (RTM);

amount

of such aqueous dispersions is 5-40 (especially 7-25) g/l (claimed). (I) gives textiles **oil-** and **water-repellent** properties, together with a soft, full feel, a smooth surface and a typical 'soft-hand effect' which is wash-resistant.

Dwg.0/0

FILE SEGMENT: CPI

FIELD AVAILABILITY: AB

MANUAL CODES: CPI: A05-G; A06-A00A; A06-A00E; A12-G03;  
F03-C02; F03-C02A; G02-A05

ABEQ EP 325918 B UPAB: 19930923

Modified **polyurethanes** containing **perfluoroaliphatic**

groups obtainable by reaction of diols containing perfluoroaliphatic groups (R1) and having 1 to 18 C atoms with di- and/or polyisocyanates to give oligo and/or polyurethanes containing free hydroxyl or isocyanate groups and R1 (compounds 1), and subsequent reaction of these compounds 1, at a temperature in the range from 30 to 180 deg.C., with polysiloxanes which contain at least 2 functional groups and can react with the free hydroxyl or the free isocyanate groups of the compounds 1, these functional groups being epoxide, carboxyl, hydroxyl, amino and/or amido groups, and the ratio of equivalents of the free hydroxyl or isocyanate groups of the oligo(poly)urethanes to the di-/polyfunctional groups of the polysiloxanes which react with these having been chosen such that all the reactive groups of the compounds (1) have been reacted.

0/0

ABEQ US 5019428 A UPAB: 19930923

**Oil- or water-repellent** finishing of a fibre material comprises applying, as an organic soln. or aq. dispersion, a modified **polyurethane** contg. **perfluoroaliphatic** gps. which is obtd. by reacting an oligo (poly)urethane contg. free hydroxyl or isocyanate gps. and perfluoroaliphatic gps. with a polysiloxane having functional gps. at elevated temp. opt. in the presence of an inert gas atmos. and a catalyst, and opt. using a carrier medium. The equiv. ratio between the free hydroxyl and isocyanate gps. on the oligo (poly)urethane and the functional gps. on the polysiloxane are chosen so all the reactive gps. are converted. The functional gps. on the oligo(poly)urethane are pref. free hydroxy gps. and the functional gps. on the polysiloxane are pref. epoxy or carboxyl gps..

ADVANTAGE - Finished fibre materials have laundering- and dry cleaning-stable effects and have good surface smoothness.

ABEQ US 5112930 A UPAB: 19930923

The modified polyurethane is obtd. by reacting (i) an oligourethane or a polyurethane contg. free OH or NCO gps. and (ii) polysiloxane contg. two or more functional gps. capable of reacting with the free hydroxyl or isocyanate gps., (i) and (ii) being reacted in an amt. such that all of the free OH or NCO gps. react with a functional gp. of (ii), at 30-180 deg.C, pref. 80-120 deg.C.

Pref. (ii) is an alpha,omega-substd. polysiloxane. Pref. the modified polyurethane is obtd. by reacting a diol which contains a 1-18C perfluoroaliphatic gp. with a diisocyanate and/or a polyisocyanate, with block formation, in such amts. that the ratio of the number of OH gps. on the diol to the number of NCO gps. on the diisocyanate or polyisocyanate is 2-14:15-3.

USE - Textile assistants are prepd. from the polyurethanes.

L113 ANSWER 35 OF 45 WPIX COPYRIGHT 2005 THE THOMSON CORP on STN

ACCESSION NUMBER: 1988-184436 [27] WPIX

DOC. NO. CPI: C1988-082242

TITLE: Aqueous dispersions of **fluorinated polyurethane(s)** - containing ionic hydrophilic gps., derived from organic di-isocyanate cpd., diol(s), poly-ol(s) and fluoro-polyether(s).

DERWENT CLASS: A25 A82 F06 G02 P41

INVENTOR(S): GAMBINI, T; ZAVATTERI, I

PATENT ASSIGNEE(S): (AUSY) AUSIMONT SPA; (LARA-N) LARAG SPA; (LARA-N) LARAC SPA

COUNTRY COUNT: 13

PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG	MAIN	IPC
EP 273449	A	19880706	(198827)*	EN	15		<--
R: BE CH DE ES FR GB LI NL							
JP 63295616	A	19881202	(198903)				<--
US 4983666	A	19910108	(199105)		9		<--
US 5068135	A	19911126	(199150)		8		<--
IT 1213441	B	19891220	(199151)				<--
EP 273449	B	19920311	(199211)		20		<--
R: BE CH DE ES FR GB LI NL							
DE 3777363	G	19920416	(199217)				<--
ES 2030048	T3	19921016	(199246)			C08G018-50	<--
CA 1319220	C	19930615	(199329)			D06M015-564	<--
JP 2540572	B2	19961002	(199644)		10	C08G018-08	<--

JP 08325951	A	19961210 (199708)	10	D06M015-576<--
JP 2618617	B2	19970611 (199728)	10	D06M015-576<--
KR 9704930	B1	19970410 (199938)		C08G018-50<--
KR 9707320	B1	19970507 (199941)		C08G018-50<--

## APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE	
EP 273449	A	EP 1987-119332	19871229	<--
JP 63295616	A	JP 1987-324226	19871223	<--
US 4983666	A	US 1990-467324	19900122	<--
US 5068135	A	US 1990-596824	19901012	<--
EP 273449	B	EP 1987-119332	19871229	<--
ES 2030048	T3	EP 1987-119332	19871229	<--
CA 1319220	C	CA 1987-555530	19871229	<--
JP 2540572	B2	JP 1987-324226	19871223	<--
JP 08325951	A Div ex	JP 1987-324226	19871223	<--
		JP 1996-19977	19871223	<--
JP 2618617	B2 Div ex	JP 1987-324226	19871223	<--
		JP 1996-19977	19871223	<--
KR 9704930	B1	KR 1987-15475	19871230	<--
KR 9707320	B1 Div ex	KR 1987-15475	19871230	<--
		KR 1997-3540	19970205	<--

## FILING DETAILS:

PATENT NO	KIND	PATENT NO
ES 2030048	T3 Based on	EP 273449
JP 2540572	B2 Previous Publ.	JP 63295616
JP 2618617	B2 Previous Publ.	JP 08325951

PRIORITY APPLN. INFO: **IT 1986-22883**  
**19861230**

REFERENCE PATENTS: EP 156155; US 3872058; US 3972856; US 4325857

## INT. PATENT CLASSIF.:

MAIN: **C08G018-08; C08G018-50; D06M015-564;**  
**D06M015-576**

SECONDARY: **B04J003-05; C04J003-05; C08F000-00; C08G018-10;**  
**C08G018-77; C08G018-83;**  
**C08L075-04; D06M015-57**

## BASIC ABSTRACT:

EP 273449 A UPAB: 19930923

Stable aqueous dispersions of **fluorinated polyurethanes** containing in their macromolecules, both anionic and cationic hydrophilic gps., are obtd. by (a) preparation of a fluorinated polyisocyanate by reaction between an organic diisocyanate and a mixture of (i) diols containing ionisable gps. and (ii) macroglycols comprising polyols and at least 1 weight% pref. 3-20 weight% of hydroxy- and/or carboxy-capped fluoropolyether(s) (I), so that the molar ratio of the isocyanate gps. to the sum of the hydroxyl gps. is 1.2-2 pref. 1.5; (b) salification of the fluorinated polyisocyanate to convert the ionisable gps. into hydrophilic cations or anions; and (c) dispersion and chain extension of the salified cpd. in water.

Alternatively, dispersions are obtd. by (c) preparation of a fluorinated polyisocyanate prepolymer as in (a); (d) conversion of the prepolymer into an oligourethane having unsatd. vinyl end-gps., by reacting a cpd. (II) containing hydroxyl gps. reactive with the isocyanate gps., selected from

hydroxyalkyl-acrylates or -methacrylates of formula (II); (e) salification of the oligo-urethane to convert into hydrophilic cations or anions; (f) dispersion in water; and (g) polymsn. of the unsatd. end-gps. of the oligo-urethane.

(In (II) R<sub>2</sub>=H or 1-4C alkyl, and W=hydroxyalkyl).

USE/ADVANTAGE - The compsns. are especially used for treating woven and non-woven textile articles comprising especially natural, artificial or synthetic fibres such as wool, silk, cotton, flax, cellulosic fibres, acrylic, polyester or polyamide fibres, in a dry-deposited amount of at least 20 g/m<sup>2</sup>, pref. 20-40 g/m<sup>2</sup>. The compsns. impart high impermeability and breathability to the textiles, partic. a permeability to water vapour of 900-1600 ng/s.m<sup>2</sup>.Pa and an impermeability to water of more than 24 hrs. under 2 m water head.

0/0

FILE SEGMENT: CPI GMPI

FIELD AVAILABILITY: AB

MANUAL CODES: CPI: A05-G01A; A07-B04; A10-E01; A12-G03;  
F03-C02A; G02-A05

ABEQ DE 3777363 G UPAB: 19930923

Stable aq. dispersions of **fluorinated polyurethanes**

contg. in their macromolecules, both anionic and cationic hydrophilic gps., are obtd. by (a) prepn. of a fluorinated polyisocyanate by reaction between an organic diisocyanate and a mixt. of (i) diols contg. ionisable gps. and (ii) macroglycols comprising polyols and at least 1 wt.% pref. 3-20 wt.% of hydroxy- and/or carboxy-capped fluoropolyether(s) (I), so that the molar ratio of the isocyanate gps. to the sum of the hydroxyl gps. is 1.2-2 pref. 1.5; (b) salification of the fluorinated polyisocyanate to convert the ionisable gps. into hydrophilic cations or anions; and (c) dispersion and chain extension of the salified cpd. in water.

Alternatively, dispersions are obtd. by (c) prepn. of a fluorinated polyisocyanate prepolymer as in (a); (d) conversion of the prepolymer into an oligourethane having unsatd. vinyl end-gps., by reacting a cpd. (II) contg. hydroxyl gps. reactive with the isocyanate gps., selected from hydroxyalkyl-acrylates or -methacrylates of formula (II); (e) salification of the oligo-urethane to convert into hydrophilic cations or anions; (f) dispersion in water; and (g) polymsn. of the unsatd. end-gps. of the oligo-urethane.

(In (II) R<sub>2</sub>=H or 1-4C alkyl, and W=hydroxyalkyl).

USE/ADVANTAGE - The compsns. are esp. used for treating woven and non-woven textile articles comprising esp. natural, artificial or synthetic fibres such as wool, silk, cotton, flax, cellulosic fibres, acrylic, polyester or polyamide fibres, in a dry-deposited amt. of at least 20 g/m<sup>2</sup>, pref. 20-40 g/m<sup>2</sup>. The compsns. impart high impermeability and breathability to the textiles, partic. a permeability to water vapour of 900-1600 ng/s.m<sup>2</sup>.Pa and an impermeability to water of more than 24 hrs. under 2 m water head.

ABEQ EP 273449 B UPAB: 19930923

Stable aq. dispersions of **fluorinated polyurethanes**

contg. in their macromolecules hydrophilic ionic gps., both of anionic and cationic character, obtainable according to the following steps: (a) preparation of a fluorinated polyisocyanate, by reaction between an organic diisocyanate and a mixt. comprising diols contg. ionisable gps. and macroglycols comprising polyols and at least 1% by wt. of one or more hydroxy- and/or carboxy-capped fluoropolyethers; (b) salification of the so-obtained fluorinated polyisocyanate, to convert the ionisable gps. into hydrophilic cations or anions; and (c) dispersion and chain extension of the salified fluorinated polyisocyanate in water.

ABEQ US 4983666 A UPAB: 19930923

Prodn. of stable aq. dispersions of **fluorinated polyurethanes** contg. hydrophilic anionic and cationic gps. in their macromolecules comprises (a) preparing a fluorinated polyisocyanate, (b) salifying the obtd. fluorinated polyisocyanate and (c) dispersing and chain extending the salified fluorinated polyisocyanate in H<sub>2</sub>O. The fluorinated polyisocyanate is prepd. by reacting an organic diisocyanate and a mixt. comprising diols contg. ionisable gps. and macroglycols comprising polyols and at least 1 wt.% of at least 1 OH- and/or carboxy capped fluoropolyoxyalkylene ethers. The molar ratio between the isocyanate gps. to the sum of the OH gps. is 1.2-2, esp. 1.5. The macroglycols comprise 3-15 wt.% of at least 1 OH- and/or carboxy capped fluoropolyoxyalkylene ethers.

USE/ADVANTAGE - Used in the prepn. of textile prods. having high liq. water impermeability and high breathability to water vapour.

ABEQ US 5068135 A UPAB: 19930923

The prepn. of (non)woven textile articles comprises treating the textile articles by means of aq. dispersions of **fluorinated polyurethanes** contg. in their macromolecules hydrophilic anionic and cationic gps., obtd. by: (a) prepg. a fluorinated polyisocyanate, by reaction between an organic diisocyanate and a mixt. comprising diols contg. ionisable gps. and macroglycols comprising polyols and 1 wt.% or more of hydroxy- and/or carboxy-capped fluoropolyoxyalkylene ether(s); (b) salifying the so-obtd. fluorinated polyisocyanate, to convert the ionisable gps. into hydrophilic cations or anions; and (c) dispersing and chain extending the salified fluorinated polyisocyanate in water.

Pref. the aq. dispersions are applied by coating on the textile articles to a level of dry deposited amt. of 20 g/m<sup>2</sup> or more, and the textile articles are natural, artificial or synthetic fibres, such as wool, silk, cotton, flax, cellulosic fibres, acrylic polyester, polyamidic fibres.

USE - **Water-repellent** clothing is mfd. by the process.

L113 ANSWER 36 OF 45 WPIX COPYRIGHT 2005 THE THOMSON CORP on STN

ACCESSION NUMBER: 1984-301390 [49] WPIX

DOC. NO. NON-CPI: N1984-224716

DOC. NO. CPI: C1984-128294

TITLE: New blocked **polyurethane** cpds. containing **per-fluoroalkyl** ligands - are thermo-fixed to impart durable dirt-, **water**-, and **oil-repellency**.

DERWENT CLASS: A25 A87 F06 P42

INVENTOR(S): GEISLER, K; KOEMM, U

PATENT ASSIGNEE(S): (FARB) BAYER AG

COUNTRY COUNT: 11

PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG	MAIN	IPC
DE 3319368	A	19841129	(198449)*		25		<--
EP 127061	A	19841205	(198449)	GE			<--
	R:	BE CH DE	FR GB IT LI NL SE				
JP 59226015	A	19841219	(198506)				<--
US 4540765	A	19850910	(198539)				<--
EP 127061	B	19880427	(198817)	GE			<--
	R:	BE CH DE	FR GB IT LI NL SE				
DE 3470749	G	19880601	(198823)				<--
JP 04072826	B	19921119	(199251)		17	C07C271-62	<--



## APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE	
DE 3319368	A	DE 1983-3319368	19830527	<--
EP 127061	A	EP 1984-105493	19840515	<--
JP 59226015	A	JP 1984-102753	19840523	<--
US 4540765	A	US 1984-612095	19840518	<--
JP 04072826	B	JP 1984-102753	19840523	<--

## FILING DETAILS:

PATENT NO	KIND	PATENT NO
JP 04072826	B Based on	JP 59226015

PRIORITY APPLN. INFO: **DE 1983-3319368****19830527**REFERENCE PATENTS: A3...8618; DE 2503877; FR 1338904; FR 2154551; No-SR.Pub;  
US 3547894; US 3759874; US 4046944

## INT. PATENT CLASSIF.:

MAIN: C07C271-62  
 SECONDARY: B05D005-00; C07C311-09; **C08G018-32**;  
**C08G018-38**; **C08G018-80**; C09D003-72;  
 D06M015-52; D06M015-576

ADDITIONAL: **C09D175-04**

## BASIC ABSTRACT:

DE 3319368 A UPAB: 19930925

Polyurethanes (I) with repeating units of formula  $-(X(NHCOORFOCONH)n-1)$ , terminal gps. of formula  $-YAm$ , and opt. units of formula  $-(Z-(NHCOE)a-R-(ECONH)b)p-1-$ , where X, Y, Z = residues of aliphatic or aromatic di- or poly-isocyanates; RF = divalent radical containing one or more perfluoroalkyl ligands, perfluoroalkyl chain containing 3-30C and, apart from F, at most 1H or 1 Cl per 2C, and opt. substd. by O atoms; n, p = number of NCO gps. on X and Z respectively, = 2-25; A = NCO gp. protected by suitable blocking gp.; m = number of blocked NCO gps. A or Y, = 1-5; E = O, S, or  $-NR'$ , where  $R' = H$ , alkyl, or aryl; R = di- or poly-radical from a di- or poly-alcohol, amine, and/or thiol; a, b = number of OH,  $NR'H$ , or SH functions in reacted alcohols, amines, or thiols  $R(EH)(a+b)$ , = 0-10. Preparation of (I) by reaction of  $RF(OH)_2$ , opt. in presence of nonfluorinated di- or poly-alcohol, amine, or -mercaptan of formula  $R(EH)(a+b)$  in mixture or in blocks with excess of di- or poly-isocyanate,  $X(NCO)_n$ ,  $Y(NCO)(m+1)$ ,  $Z(NCO)_p$  such that polyurethane chains or networks so obt'd. have terminal free NCO gps., which are then blocked by suitable protective gps..

Pref. RF is derived from dialcohol  $RF(OH)_2$ , substd. with perfluoroalkyl chain having 4-12C in side chain, partic. from N-(dihydroxyalkyl)- or N,N-bis(hydroxyalkyl)- perfluoroalkyl-sulphonamides. Blocking agent is an oxime. (I) have average mol.weight 1000-20000 and contain 4-40 weight% F.

USE/ADVANTAGE - Imparting dirt-, **water-**, and **oil-repellent** finish to surfaces, partic. woven textiles and fibres.

(I) can be applied from aqueous bath, then deblocked at higher temperature for fixing on substrate, have good film-forming properties, long-lasting hydro- and oleo-plastic effect at low application rate.

0/0

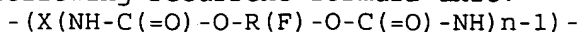
FILE SEGMENT: CPI GMPI

FIELD AVAILABILITY: AB

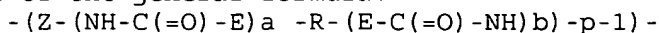
MANUAL CODES: CPI: **A05-G**; A12-G03; F03-C02; F03-C02A

ABEQ EP 127061 B UPAB: 19930925

**Polyurethanes** containing **perfluoroalkyl** ligands having the following recurrent formula unit:



and chain ends corresponding to the general formula -YAm, the recurrent formula unit in the polyurethane being optionally substituted by units of the general formula:



wherein X, Y and Z denote the structural radicals of aliphatic or aromatic di- or poly-isocyanates; R(F) denotes a member of the group of monofunctional or difunctional N-(sulphonylperfluoroalkyl aminoalkyl derivatives; n denotes the number of isocyanate groups on the structural radical X (integer from 2 to 25); A denotes an isocyanate group protected by a suitable blocking agent; m denotes the number of blocked isocyanate groups A on the structural radical Y (integer from 1 to 5); E denotes the atoms O or S and the molecular group -NR', wherein R' = H, alkyl or aryl; R denotes a di- or poly-radical derived from a d-(poly)-alcohol, -amine or -thiol or a combination of these; a, b denotes the number of -OH, -NR'H or -SH functions in the alcohols, amines or thiols R(EH)(a+b) used (integer from 0 to 10) and p denotes the number of isocyanate groups on the structural radical Z (integer from 0 to 25).

ABEQ US 4540765 A UPAB: 19930925

A **polyurethane** contg. **perfluoroalkyl** ligands and having as recurring structural units (I) and/or (II) with chain ends of formula -YAm', is prepd. by condensing (1) dialcohols contg. perfluoroalkyl ligands of formula RF(OH)<sub>2</sub>, opt. with non-fluorinated di- or polyalcohols or amines or mercaptans of formula R-(EH)(a+b), in admixt. or blocks with one or more di- or polyisocyanates of formulae X(NCO)<sub>n</sub>, (Y(NCO)(m+1), or Z(NCO)<sub>p</sub>, at 20-110 deg.C, so that the polyurethane chains or networks formed carry at their ends free isocyanate gps. which, finally, are blocked with a suitable protective gp. e.g. oximes, sulphites and phenols, at 10-60 deg.C.

X, Y and Z are aliphatic or aromatic di- or polyisocyanate skeletal radicals; RF is C<sub>4</sub>F<sub>9</sub>SO<sub>2</sub>N(C<sub>2</sub>H<sub>4</sub>-)<sub>2</sub>, C<sub>8</sub>H<sub>17</sub>SO<sub>2</sub>N(C<sub>2</sub>H<sub>4</sub>-)<sub>2</sub>, C<sub>8</sub>H<sub>17</sub>SO<sub>2</sub>R<sub>1</sub>, or C<sub>4</sub>F<sub>9</sub>-O-C<sub>4</sub>F<sub>3</sub>-SO<sub>2</sub>N(C<sub>2</sub>H<sub>4</sub>-)<sub>2</sub>, R<sub>1</sub> is N(CH<sub>2</sub>CHMe)<sub>2</sub>, N(Me)CH<sub>2</sub>CHCH<sub>2</sub>, or NHC(O)O(CH<sub>2</sub>)<sub>2</sub>-C(EE)-(C<sub>2</sub>H<sub>4</sub>-)<sub>2</sub>; n is 2-25; A is a protected isocyanate gp.; m is the no. of blocked isocyanate A on Y and is 1-5; E is O, S or NR'; R' is H, alkyl or aryl, R is the radical of a cpd. contg. at least two alcohol, amine and/or thiol gps., a and b are the no. of OH, NR'H or SH functions in the alcohols, amines or thiol (R(EH)(a+b) used, and each is 0-10, and p is no. of isocyanate gps. on Z and is 0-25.

USE/ADVANTAGE - Chemically fixed polyurethane film that contains perfluoroalkyl ligands that are not removed by washing or dry cleaning.

L113 ANSWER 37 OF 45 WPIX COPYRIGHT 2005 THE THOMSON CORP on STN  
 ACCESSION NUMBER: 1975-55622W [34] WPIX  
 TITLE: **Polyurethanes** containing **perfluoroalkylthio**  
 gps - for rendering porous and non-porous surfaces  
**resistant to grease and water**  
 .  
 DERWENT CLASS: A25 A87 F06 G02  
 PATENT ASSIGNEE(S): (CIBA) CIBA GEIGY AG  
 COUNTRY COUNT: 8  
 PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG	MAIN	IPC
BE 825104	A	19750804	(197534)*				<--
DE 2503872	A	19751030	(197545)				<--
JP 50114497	A	19750908	(197545)				<--

FR 2267334	A	19751212 (197605)	<--
US 3968066	A	19760706 (197629)	<--
GB 1499122	A	19780125 (197804)	<--
CH 606175	A	19781031 (197848)	<--
CA 1066842	A	19791120 (197949)	<--
JP 55018246	B	19800517 (198024)	<--
JP 55098273	A	19800726 (198036)	<--
DE 2503872	C	19871119 (198746)	<--

PRIORITY APPLN. INFO: US 1974-439497

19740204; US

1974-462169 19740418

INT. PATENT CLASSIF.: C07C149-16; C08G018-38; C08L075-04;  
C09K003-00; D06M015-52

## BASIC ABSTRACT:

BE 825104 A UPAB: 19930831

**Polyurethanes** containing **perfluoroalkylthio** gps. are obtained by reacting at 20-120 degrees C, in the presence of inert anhydrous organic solvents or in the absence of any solvent. (a) an organic isocyanate or isocyanate polymer, and (b) at least one of the following products: (1) an Rf-glycol of formula (I): (2) a polymer with a terminal OH gps. and containing at least one of formula (II): (where Rf is 1-18C perfluoroalkyl opt. substd. by a 2-6C perfluoroalkyl gp. r1 is opt. branched 1-12C alkylene 2-12C alkylene-thioalkylene, 2-12C alkylene-oxyalkylene, or 2-12C alkylene-imino-alkylene in which the N atom carries, as third constituent, H or 1-6C alkyl, R2 and R3 are independently 1-12C alkylene opt. substd. by one or two phenyl or cyclohexyl gps. or R2 and R3 are a gp. of formula (III): CmH2m(OCkH2k) (III), where m is a whole number 1-12, m is a whole number 2-6, and r is a

whole

number 1-40). Porous and non-porous surfaces, e.g. textiles, leather, paper, wood masonry, unglazed porcelain, etc. and metals, plastics, glass, painted surfaces, etc. are rendered **grease- and water-repellant**, withsolns. of latices of the polyurethane. The anti-soiling props. of a textile treated with the polyurethane are also improved if the polyurethane contains a quaternary ammonium salt containing a long hydrocarbon chain in amount of 0.01-0.3% by weight of the textile.

FILE SEGMENT: CPI

FIELD AVAILABILITY: AB

MANUAL CODES: CPI: A05-G; A05-G04; A12-B01  
; A12-G03; F03-C02; F03-C02A; F05-A06B; F05-B;  
G02-A05

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YOU HAVE REQUESTED DATA FROM FILE 'WPIX, HCAPLUS, USPATFULL, WSCA, RAPRA, SCISEARCH' - CONTINUE? (Y)/N:y

L113 ANSWER 38 OF 45 USPATFULL on STN

ACCESSION NUMBER: 2003:300991 USPATFULL

TITLE: Fluorinated activator

INVENTOR(S): Sawant, Suresh, Stevenson Ranch, CA, UNITED STATES  
Morkunas, Bernard, Thousand Oaks, CA, UNITED STATES

NUMBER KIND DATE

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PATENT INFORMATION:    US 2003212217      A1    20031113
APPLICATION INFO.:    US 2002-142564      A1    20020508  (10)
DOCUMENT TYPE:        Utility
FILE SEGMENT:         APPLICATION
LEGAL REPRESENTATIVE: Finnegan, Henderson, Farabow,, Garrett & Dunner,
                      L.L.P., 1300 I Street, N.W., Washington, DC, 20005-3315
NUMBER OF CLAIMS:     28
EXEMPLARY CLAIM:      1
LINE COUNT:           500
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB      Coating compositions and methods of making and using such coating
        compositions, for providing durability and repellency. The coating
        composition comprising a polyol, a polyisocyanate, and a fluorinated
        activator, optionally prepared from a polyol, a polyisocyanate and a
        perfluoroalkyl alcohol.
IT 138861-14-ODP, Tolonate HDT-LV, reaction products with
        perfluorohexylethanol
        (preparation of fluorinated activators for coatings with good durability and
        repellency)
RN 138861-14-0  USPATFULL
CN Tolonate HDT-LV (9CI)  (CA INDEX NAME)

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# STRUCTURE DIAGRAM IS NOT AVAILABLE

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YOU HAVE REQUESTED DATA FROM FILE 'WPIX, HCAPLUS, USPATFULL, WSCA, RAPRA,  
SCISEARCH' - CONTINUE? (Y)/N:y

'HITIND' IS NOT A VALID FORMAT

In a multifile environment, a format can only be used if it is valid  
in at least one of the files. Refer to file specific help messages  
or the STNGUIDE file for information on formats available in  
individual files.

REENTER DISPLAY FORMAT FOR ALL FILES (FILEDEFAULT):ibib ed ab kwic  
YOU HAVE REQUESTED DATA FROM 7 ANSWERS - CONTINUE? Y/(N):y

L113 ANSWER 39 OF 45 WSCA COPYRIGHT 2005 PAINT RESEARCH on STN

ACCESSION NUMBER: 385660 WSCA

DOCUMENT NUMBER: 94-05660

TITLE: Novel, **fluorine**-containing, anionic aqueous  
**polyurethanes**.

AUTHOR: YANG S ; OTHERS

SOURCE: J. Macromol. Sci. 1993, Vol A30 Nos 2/3, 241-52.

DOCUMENT TYPE: Journal

LANGUAGE: English

AB The water-borne dispersions of polyurethanes were prepared from  
dicyclohexylmethane **diisocyanate**, dimethylolpropionic acid,  
1,4-cyclohexanediamine as cis/trans isomer mixture, a polytetramethylene  
glycol, and 2, 5 or 10% by weight, on this glycol, of a partially  
fluorinated polyether glycol. The inclusion in the **polyurethanes**  
of the **fluorinated** component improved the mechanical properties  
and **water resistance**, due to increased intermolecular  
forces and crystallinity, as well as the hydrophobic nature of that  
component. However, peel strength was reduced and the solutions were more  
viscous. The fluorinated polyether has hydroxyl terminal groups and its  
repeat units each have, in sequence, structural residues of

2,2,3,3,4,4-hexafluoropentane-1,5-diol, 1,1,2-trifluoroethylene glycol, hexafluoropropylene glycol and 2,2,3,3-tetrafluorotrimethylene glycol. The fluorinated diol has molecular weight 3460. 23 refs.

CN 1,4-DIAMINOCYCLOHEXANE; 2,2,3,3,4,4-HEXAFLUOROPENTANE-1,5-DIOL; AMINE; DIAMINOCYCLOHEXANE (1,4-); **DICYCLOHEXYLMETHANE DIISOCYANATE**; DIMETHYLOLPROPIONIC ACID; FLUORINE; GLYCOL; **ISOCYANATE**; POLYETHER; POLYTETRAMETHYLENE GLYCOL; POLYURETHANE

IT **Polyurethanes**: carboxylated, **fluorinated**, dispersions (aq); Dispersions, Aqueous: **polyurethanes** (carboxylated/**fluorinated**)

PY 1993

TI Novel, **fluorine**-containing, anionic aqueous **polyurethanes**.

AB The water-borne dispersions of polyurethanes were prepared from dicyclohexylmethane **diisocyanate**, dimethylolpropionic acid, 1,4-cyclohexanediamine as cis/trans isomer mixture, a polytetramethylene glycol, and 2, 5 or 10% by weight, on this glycol, of a partially fluorinated polyether glycol. The inclusion in the **polyurethanes** of the **fluorinated** component improved the mechanical properties and **water resistance**, due to increased intermolecular forces and crystallinity, as well as the hydrophobic nature of that component. However, peel strength was.

L113 ANSWER 40 OF 45 WSCA COPYRIGHT 2005 PAINT RESEARCH on STN

ACCESSION NUMBER: 322836 WSCA

DOCUMENT NUMBER: 91-02836

TITLE: Fire-retardant polyurethanes.

AUTHOR: RAJALINGAM P; RADHAKRISHNAN G ; RAO K V

SOURCE: Acta Polymerica 1990, Vol 41 No 3, 169-72: RAPRA Abs 1990, Vol 27 No 11, Abs 0061191L.

DOCUMENT TYPE: Journal

LANGUAGE: English

AB A literature review is represented on the preparation of fire-retardant polyurethanes based on halogenated compounds. Topics considered are the role of halogen compounds in causing fire retardancy, polyurethanes with chlorine in the backbone, chlorine-containing additives, **fluorinated polyether-based polyurethanes**, **fluorinated polyester-based polyurethanes** and **polyurethanes from fluorinated isocyanates**.

Comments are made on other properties of the materials, e.g. **oil resistance**, low temperature adhesive properties, **moisture resistance** and stability in liquid oxygen. 68 refs.

CN CHLORINE; **ISOCYANATE**; POLYURETHANE; POLYETHER-URETHANE; POLYESTER-URETHANE; OXYGEN

IT Polyurethanes: chlorinated, fire retardance, review; **Polyurethanes: fluorinated**, fire retardance, review; Fire Retardants: chlorinated, review; Fire Retardance: polyurethanes (chlorinated), review; Fire Retardance: **polyurethanes (fluorinated)**, review; Oxygen: liquid, resistance

PY 1990

ST **fluorinated polyether-urethane; fluorinated polyester-urethane**

AB. . Topics considered are the role of halogen compounds in causing fire retardancy, polyurethanes with chlorine in the backbone, chlorine-containing additives, **fluorinated polyether-based polyurethanes**, **fluorinated polyester-based polyurethanes** and **polyurethanes from fluorinated isocyanates**. Comments are made on other properties of the materials, e.g. **oil resistance**, low

temperature adhesive properties, **moisture resistance**  
and stability in liquid oxygen. 68 refs.

L113 ANSWER 41 OF 45 RAPRA COPYRIGHT 2005 RAPRA on STN

ACCESSION NUMBER: R:671329 RAPRA

FILE SEGMENT: Rapra Abstracts

TITLE: **POLYURETHANES DERIVED FROM OLIGOPERFLUOROALKYL ALCOHOLS.**

INVENTOR: Haniff M; Falk R; Deisenroth T; Mueller K F

PATENT ASSIGNEE: Ciba-Geigy Corp.

CORPORATE ADDRESS: Tarrytown, New York, USA

PATENT INFORMATION: **US 5663273 A 19970902**

APPLICATION INFORMATION: **US 1995-456217 19950531**

DOCUMENT TYPE: Patent

LANGUAGE: English

AB Di-, tri- and poly-perfluoroalkyl-substituted alcohols and acids and derivatives thereof are described which are prepared from perfluoroalkyl iodides and di-, tri- or polyallyl alcohols or acids. These compounds contain two or more perfluoroalkyl-iodoalkyl or perfluoroalkyl-alkenyl groups and one or two alcohol or acid groups or derivatised alcohol or acid functions. They can be reacted with **isocyanates**, epoxy compounds, anhydrides acids or acid derivatives to prepare a great variety of **oil-** and **water-repellent** compositions which are useful for **oil-** and **water-repellent** treatment of textiles, glass, paper, leather and other substrates.

TI **POLYURETHANES DERIVED FROM OLIGOPERFLUOROALKYL ALCOHOLS.**

PI **US 5663273 A 19970902**

PI **US 5663273 A 19970902**

AI **US 1995-456217 19950531**

AB. . . groups and one or two alcohol or acid groups or derivatised alcohol or acid functions. They can be reacted with **isocyanates**, epoxy compounds, anhydrides acids or acid derivatives to prepare a great variety of **oil-** and **water-repellent** compositions which are useful for **oil-** and **water-repellent** treatment of textiles, glass, paper, leather and other substrates.

CT APPLICATION; COMPANIES; COMPANY; ELASTOMER; **OIL REPELLENT**; **OIL-REPELLENT**; PLASTIC; POLYURETHANE; PU; RUBBER; TECHNICAL; TEXTILE APPLICATION; THERMOPLASTIC; THERMOSET; URETHANE POLYMER; **WATER REPELLENT**

L113 ANSWER 42 OF 45 RAPRA COPYRIGHT 2005 RAPRA on STN

ACCESSION NUMBER: R:541013 RAPRA

FILE SEGMENT: Rapra Abstracts

TITLE: AGENT FOR THE TREATMENT OF FIBRE MATERIALS.

INVENTOR: Rossler E; Sahin B

PATENT ASSIGNEE: Ciba-Geigy Corp.

CORPORATE ADDRESS: Ardsley, New York, USA

PATENT INFORMATION: **US 5324763 A 19940628**

APPLICATION INFORMATION: **US 1991-809684 19911217**

PRIORITY APPLN. INFO: **DE 1990-4040641 19901219**

DOCUMENT TYPE: Patent

LANGUAGE: English

AB Highly effective agents for the **water** and **oil repellent** finishing of fibrous, in particular textile, materials contain at least two components which are aqueous dispersions. One of the dispersions contains a copolymer of a fluorine-containing (meth)acrylate,

vinyl chloride and a fluorine-free (meth)acrylate, and also ethoxylated alkylphenol. The other dispersion contains either a copolymer of a fluorine-containing acrylate, vinylidene chloride and a fluorine-free (meth)acrylate and also ethoxylated fatty acids or an oxime-blocked **isocyanate**, a **fluorine-containing oligo-** or **polyurethane** and also an ethoxylated fatty amine (salt). The agents lead to a pleasantly soft handle on the finished textile material and in many cases reduce the bleeding of dyed textiles.

PI US 5324763 A 19940628

PI US 5324763 A 19940628

AI US 1991-809684 19911217

PRAI DE 1990-4040641 19901219

AB Highly effective agents for the **water** and **oil repellent** finishing of fibrous, in particular textile, materials contain at least two components which are aqueous dispersions. One of the dispersions. . . a copolymer of a fluorine-containing acrylate, vinylidene chloride and a fluorine-free (meth)acrylate and also ethoxylated fatty acids or an oxime-blocked **isocyanate**, a **fluorine-containing oligo-** or **polyurethane** and also an ethoxylated fatty amine (salt). The agents lead to a pleasantly soft handle on the finished textile material. . .

L113 ANSWER 43 OF 45 RAPRA COPYRIGHT 2005 RAPRA on STN

ACCESSION NUMBER: R:435149 RAPRA

FILE SEGMENT: Rapra Abstracts

TITLE: NOVEL **FLUORINE** CONTAINING ANIONIC AQUEOUS **POLYURETHANES**.

AUTHOR: Yang S; Xiao H X; Chen W P; Kresta J; Frisch K C; Highley D P (DETROIT, MERCY UNIVERSITY; DU PONT DE NEMOURS E.I., & CO. INC.)

SOURCE: Progress in Rubber and Plastics Technology  
7, No. 3, 1991, p. 163-73  
ISSN: 0266-7320  
CODEN: PRPTEE

PUBLICATION YEAR: 1991

DOCUMENT TYPE: Journal

LANGUAGE: English

AB Various small amounts of fluorine containing polyols (F-diol) were introduced in the soft segment of the anionic aqueous PUs to examine their effect on properties. **Cyclohexylisocyanate**, dimethylolpropionic acid and cyclohexanediamine were the hard segments. Both mechanical and **water resistance** were improved by F-diol in the soft segment. DSC and DMA for the F-diol modified aqueous PU indicated that both intermolecular forces and crystallinity increased with increasing concentration of F-diol. 20 refs.

TI NOVEL **FLUORINE** CONTAINING ANIONIC AQUEOUS **POLYURETHANES**

PY 1991

AB. . . containing polyols (F-diol) were introduced in the soft segment of the anionic aqueous PUs to examine their effect on properties. **Cyclohexylisocyanate**, dimethylolpropionic acid and cyclohexanediamine were the hard segments. Both mechanical and **water resistance** were improved by F-diol in the soft segment. DSC and DMA for the F-diol modified aqueous PU indicated that both. . .

CT. . . ANALYSIS; DMA; DSC; DYNAMIC MECHANICAL ANALYSIS; FLUORINE-CONTAINING POLYMER; FLUOROPOLYMER; GRAPH; MECHANICAL PROPERTIES; PLASTIC; POLYURETHANE; PU; TABLES; TECHNICAL; THERMOPLASTIC; WATER ABSORPTION; **WATER RESISTANCE**

NPT CYCLOHEXANEDIAMINE; **CYCLOHEXYL ISOCYANATE**; DIMETHYLOLPROPIONIC  
ACID; POLYOL  
SHR **URETHANE** POLYMERS, aqueous dispersions, **fluorine**  
containing

L113 ANSWER 44 OF 45 RAPRA COPYRIGHT 2005 RAPRA on STN

ACCESSION NUMBER: R:72451 RAPRA  
FILE SEGMENT: Rapra Abstracts  
TITLE: **POLYURETHANES** CONTAINING  
**PERFLUOROALKYLTHIO** GROUPS EQUIVALENT TO BE  
825104.  
PATENT ASSIGNEE: CIBA GEIGY AG  
SOURCE: PR.4.2.74,8.4.74(462169) (US) PUBL.25.1.78  
PATENT INFORMATION: GB 1499122  
DOCUMENT TYPE: Patent  
LANGUAGE: English

AB PREPARED BY REACTING, E.G. AN ORGANIC **POLYISOCYANATE** WITH AN  
RESORCINOL-FORMALDEHYDE GLYCOL, E.G. 2,3-BIS(1,1,2,2-  
TETRAHYDROPERFLUORODECYLTHIO)-BUTANE-1, 4-DIOL. USED FOR RENDERING POROUS  
AND NON-POROUS SURFACES **RESISTANT TO GREASE** AND  
WATER.

TI **POLYURETHANES** CONTAINING **PERFLUOROALKYLTHIO** GROUPS  
EQUIVALENT TO BE 825104.

PI GB 1499122

AB PREPARED BY REACTING, E.G. AN ORGANIC **POLYISOCYANATE** WITH AN  
RESORCINOL-FORMALDEHYDE GLYCOL, E.G. 2,3-BIS(1,1,2,2-  
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AND NON-POROUS SURFACES **RESISTANT TO GREASE** AND  
WATER.

CT CHEMICAL RESISTANCE; GLYCOL; POLYURETHANE; **WATER RESISTANCE**;  
RESORCINOL-FORMALDEHYDE RESIN; ORGANIC; **POLYISOCYANATE**

L113 ANSWER 45 OF 45 SCISEARCH COPYRIGHT (c) 2005 The Thomson Corporation on  
STN

ACCESSION NUMBER: 1993:168710 SCISEARCH

THE GENUINE ARTICLE: KR062

TITLE: NOVEL **FLUORINE**-CONTAINING ANIONIC AQUEOUS  
**POLYURETHANES**

AUTHOR: YANG S (Reprint); XIAO H X; HIGLEY D P; KRESTA J; FRISCH K  
C; FARNHAM W B; HUNG M H

CORPORATE SOURCE: UNIV DETROIT MERCY, INST POLYMER, 4001 W MCNICHOLS RD,  
DETROIT, MI 48221 (Reprint); DUPONT CO, PETROCHEM,  
WILMINGTON, DE 19880

COUNTRY OF AUTHOR: USA

SOURCE: JOURNAL OF MACROMOLECULAR SCIENCE-PURE AND APPLIED  
CHEMISTRY, (1993) Vol. A30, No. 2-3, pp. 241-252

ISSN: 1060-1325.

PUBLISHER: MARCEL DEKKER INC, 270 MADISON AVE, NEW YORK, NY 10016.

DOCUMENT TYPE: Article; Journal

FILE SEGMENT: PHYS

LANGUAGE: English

REFERENCE COUNT: 23

ENTRY DATE: Entered STN: 1994

Last Updated on STN: 1994

\*ABSTRACT IS AVAILABLE IN THE ALL AND IALL FORMATS\*

ED Entered STN: 1994

Last Updated on STN: 1994

AB Various amounts of fluorine-containing polyol (F-diol, MW = 3700) were



introduced into the soft segment of anionic aqueous polyurethanes PUs to examine the effect of the F-diol on the properties of the anionic aqueous PUs. The hard segments in the anionic aqueous PUs consisted of 4,4'-methylene bis(**cyclohexylisocyanate**), dimethylolpropionic acid, and 1,4-cyclohexanediamine (cis/trans = 80/20). Both the mechanical and **water resistance** properties of the anionic aqueous PUs were improved after introducing small amounts of the F-diol in the soft segment of the aqueous PUs. This is due to the increased intermolecular forces and crystallinity as well as the hydrophobic characteristic of the F-diol. Thermal analysis of the F-diol modified anionic aqueous PUs by differential scanning calorimetry and dynamic mechanical analysis indicated that both intermolecular forces and crystallinity increased with increasing concentration of the F-diol. However, both the increased intermolecular forces and crystallinity could have an adverse effect on the interface adhesion.

TI NOVEL **FLUORINE**-CONTAINING ANIONIC AQUEOUS **POLYURETHANES**  
SO JOURNAL OF MACROMOLECULAR SCIENCE-PURE AND APPLIED CHEMISTRY, ( 1993) Vol. A30, No. 2-3, pp. 241-252.  
ISSN: 1060-1325.

. . . F-diol on the properties of the anionic aqueous PUs. The hard segments in the anionic aqueous PUs consisted of 4,4'-methylene bis(**cyclohexylisocyanate**), dimethylolpropionic acid, and 1,4-cyclohexanediamine (cis/trans = 80/20). Both the mechanical and **water resistance** properties of the anionic aqueous PUs were improved after introducing small amounts of the F-diol in the soft segment of. . .

=> d his l112

(FILE 'HCAPLUS, MEDLINE, BIOSIS, PASCAL, JICST-EPLUS, WSCA, APOLLIT, CORROSION, EMA, RAPRA, EMBASE, SCISEARCH, CONF, CONFSCI, WPIX' ENTERED AT 12:36:28 ON 11 JUL 2005)

L112 5 S L111 AND (?WATERPROOF? OR ?OILPROOF? OR ((L77 OR L78) (3A)L79)

=> d que l112

L55 QUE ABB=ON PLU=ON ?FLUORO? OR ?FLUORIN? OR ?PERFLUORO?  
OR ?PERFLUORIN? OR (PER(1W)FLUORO?) OR (PER(1W)FLUORIN?)  
L77 QUE ABB=ON PLU=ON WATER OR H2O OR HYDRO OR MOISTURE  
L78 QUE ABB=ON PLU=ON OIL OR GREASE OR LIPID OR FAT  
L79 QUE ABB=ON PLU=ON ?PROOF? OR ?REPEL? OR ?RESIST?  
L105 292 SEA TURRI, S?/AU  
L106 5822 SEA LEVI, M?/AU  
L107 80 SEA TROMBETTA, T?/AU  
L108 196 SEA (L105 OR L106 OR L107) AND (?URETHAN? OR ?POLYURETHAN? OR ?OLIGOURETHAN?)  
L109 86 DUP REM L108 (110 DUPLICATES REMOVED)  
L110 44 SEA L109 AND ?AUSIMONT?/PA,CS,SO,IN,BI  
L111 43 SEA L110 AND L55  
L112 5 SEA L111 AND (?WATERPROOF? OR ?OILPROOF? OR ((L77 OR L78) (3A)L79))

=> d ibib ed ab l112 1-

YOU HAVE REQUESTED DATA FROM FILE 'HCAPLUS' - CONTINUE? (Y)/N:y

YOU HAVE REQUESTED DATA FROM 5 ANSWERS - CONTINUE? Y/(N):y

L112 ANSWER 1 OF 5 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2003:20955 HCAPLUS

DOCUMENT NUMBER: 138:74959

TITLE: Dispersions of **fluorinated polyurethanes**

INVENTOR(S): **Turri, Stefano; Trombetta, Tania;**  
Iengo, Paolo

PATENT ASSIGNEE(S): **Ausimont S.p.A., Italy**

SOURCE: Eur. Pat. Appl., 26 pp.

CODEN: EPXXDW

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 1273704	A1	20030108	EP 2002-14155	20020625
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR				
CA 2391668	AA	20030105	CA 2002-2391668	20020625
US 2003136533	A1	20030724	US 2002-183350	20020628
JP 2003129394	A2	20030508	JP 2002-196103	20020704
PRIORITY APPLN. INFO.:			IT 2001-MI1424	A 20010705

ED Entered STN: 10 Jan 2003

AB Aqueous **polyurethane** dispersions from (**per**)  
**fluoropolyethers** are useful for paper sizing and are obtainable by

reaction among the following compds.: (a) (**per**) **fluoropolyether** diols having a number average mol. weight from 400 to 5,000; (b) diisocyanates having formula: OCN-R-NCO wherein R is an aliphatic, cycloaliph. bifunctional radical; or an aromatic bifunctional radical; (c) diols containing one carboxylic function and optionally one or both the following components: (d) hydrazine and/or aliphatic diamines; (e) monofunctional hydroxylic (**per**) **fluoropolyethers** having a number average mol. weight in the range 300-1,000. A **polyurethane** was prepared from a **perfluoropolyether** (ZDOL), isophorone diisocyanate, and dimethylolpropionic acid.

REFERENCE COUNT: 9 THERE ARE 9 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L112 ANSWER 2 OF 5 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2001:900148 HCAPLUS

DOCUMENT NUMBER: 136:38079

TITLE: **Polyurethanes** having a low friction coefficient

INVENTOR(S): Scicchitano, Massimo; Trombetta, Tania; Turri, Stefano

PATENT ASSIGNEE(S): Ausimont S.p.A., Italy

SOURCE: Eur. Pat. Appl., 19 pp.

CODEN: EPXXDW

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 1162220	A1	20011212	EP 2001-113060	20010529
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
IT 1318558	B1	20030827	IT 2000-MI1268	20000608
JP 2002030294	A2	20020131	JP 2001-173142	20010607
US 2002016267	A1	20020207	US 2001-875980	20010608
US 6579835	B2	20030617		

PRIORITY APPLN. INFO.: IT 2000-MI1268 A 20000608

ED Entered STN: 14 Dec 2001

AB Use of **fluorinated polyurethanes** thermally crosslinkable for obtaining coatings having an improved friction coefficient for the dry lubrication of rubbers, plastics, metals, glass, said **polyurethanes** obtainable from aqueous dispersions of cationic **oligourethanes** having a mol. weight  $\leq 9,000$ , formed by: (a) polyisocyanates, having NCO functionality higher than 2, (b) bifunctional hydrogenated monomers, (c) bifunctional hydroxylated (**per**) **fluoropolyethers**, (e) monofunctional hydroxyl or carboxylic (**per**) **fluoropolyethers** or monofunctional hydroxyl (**per**) **fluoroalkanes** optionally: (d) hydrogenated monomers by which it is possible to insert a crosslinkable chemical function in the **oligourethane**; (d') hydrogen-active compds., able to form with the NCO functions thermolabile bonds. Thus, 400 g Vestanat T 1890/100 in 400 g anhydrous Et acetate was heated to  $\leq 70^\circ$  and mixed with 2,5 mL of solution at 20 weight% of Fascat 4224, 55.07 g dimethylaminopropanol, and

117

g **perfluoropolyether** diol Fomblin ZDOL diluted with 297 g anhydrous Et acetate and reacted for 30 min in the presence of 38.49 g acetic acid dissolved in 162 g N-methylpyrrolidinone followed by addition of 3.8 kg water to give a cationic **polyurethane** used in the treatment of EPDM

giving samples with friction coefficient (ASTM D 1894-78) 0.30-0.40, adhesion 100%, and **water resistance** >200 double strokes.

REFERENCE COUNT: 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L112 ANSWER 3 OF 5 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2001:523163 HCAPLUS

DOCUMENT NUMBER: 136:136330

TITLE: **Fluoropolyethers** as binders for high performance automotive coatings

AUTHOR(S): Temtchenko, Tatiana; Novelli, Sergio; **Turri, Stefano**

CORPORATE SOURCE: Coatings Technical Service Group, **Ausimont** S.p.A., Spinetta Marengo, 15047, Italy

SOURCE: FATIPEC Congress (2000), 25th(Vol. 2), 171-185  
CODEN: FAPVAP; ISSN: 0430-2222

PUBLISHER: AITIVA

DOCUMENT TYPE: Journal

LANGUAGE: English

ED Entered STN: 19 Jul 2001

AB Polyfunctional OH-terminated **perfluoropolyether** (PFPE) resins can be successfully blended and formulated with com. available blocked isocyanates leading to high solids (70-80 weight%) monocomponent **polyurethanes** with high d. of crosslinking. The performances of cured **fluorinated** coatings were compared with those of reference acrylic solvent-borne coatings. Clearcoats were applied over conventional OEM basecoats (car body painting) and polyester powder coatings (wheels painting). The **fluorinated** films showed a remarkable improvement of anticorrosion performances, acid and mar resistance and durability as well as excellent stain release properties conferring to the final paint the self-cleaning behavior typical of PFPE coatings.

REFERENCE COUNT: 14 THERE ARE 14 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L112 ANSWER 4 OF 5 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2000:876782 HCAPLUS

DOCUMENT NUMBER: 134:43472

TITLE: **Fluorinated oligourethanes**

INVENTOR(S): **Turri, Stefano; Levi, Marinella; Trombetta, Tania**

PATENT ASSIGNEE(S): **Ausimont S.p.A., Italy**

SOURCE: Eur. Pat. Appl., 17 pp.  
CODEN: EPXXDW

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 1059319	A2	20001213	EP 2000-112141	20000606
EP 1059319	A3	20020123		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
JP 2001019736	A2	20010123	JP 2000-176155	20000612
PRIORITY APPLN. INFO.:			IT 1999-MI1303	A 19990611

ED Entered STN: 15 Dec 2000

AB **Fluorinated oligourethanes**, having number average mol. weight lower than or equal to 9,000 and a branched structure, are formed of the

following monomers and macromers: (a) aliphatic, cycloaliph. or aromatic polyisocyanates, (b)  $X_0(CR_1AR_2A)BY_0$  [ $R_1A$ ,  $R_2A$  = H or C1-10 aliphatic radical;  $b = 1-20$ ;  $X_0$  = OH or SH;  $Y_0$  = anionic or cationic salifiable function or when  $X_0$  = OH,  $b = 1$ ,  $R_1A = R_2A = H$ , and  $Y_0 = CH_2O(CH_2CH_2O)_nMe$ ,  $n = 3-20$ ]; one or more of the following compds.: (c) bifunctional hydroxyl (**per**) **fluoropolyethers** (PFPE diols) having number average mol. weight in the range 400-3,000, (e) monofunctional hydroxyl (**per**) **fluoropolyethers** or monofunctional hydroxyl (**per**) **fluoroalkanes** (e'), having number average mol. weight in the range 300-1,000; and, optionally, the following compds.: (d)  $X_0(CR_1AR_2A)BY_0$  ( $R_1A$ ,  $R_2A$ ,  $b$ , and  $X_0$  = same as above;  $Y_0$  = oxiranyl,  $OCOR_1BC:CH_2$ ,  $Si(OR_x)_3$ ,  $CH_2CH:CH_2$ , or  $OCH:CH_2$ ;  $R_1B = H$  or Me;  $R_x = C1-5$  alkyl); (dl) hydrogen-active compds., capable to form bonds with the NCO functions stable at the hydrolysis but weak at heat. These **oligourethanes** are useful as **water-** and **oil-repellent** coatings for substrates with high porosity. A typical IPDI-based **oligourethane** was manufactured by stirring a solution containing 45 g Vestanat T1890, 51 g EtOAc, 6.189 g dimethylaminopropanol, 0.6 mL 20% Fascat 4224 solution 1 h at 70°, adding 240 g EtOAc and 68.1 g  $HOCH_2CF_2O(CF_2CF_2O)_p(CF_2O)_qCF_2CH_2OH$  ( $p/q = 2.2$ ) and heating 8 h at reflux.

L112 ANSWER 5 OF 5 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2000:686316 HCAPLUS

DOCUMENT NUMBER: 133:268173

TITLE: **Hydro- oil-repellent**  
compositions for textiles

INVENTOR(S): Lenti, Daria; **Trombetta, Tania**; Carignano,  
Gabriella

PATENT ASSIGNEE(S): **Ausimont S.P.A., Italy**; Solvay Solexis  
S.p.A.

SOURCE: Eur. Pat. Appl., 18 pp.  
CODEN: EPXXDW

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 1038919	A1	20000927	EP 2000-105518	20000315
EP 1038919	B1	20040811		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
IT 1311977	B1	20020322	IT 1999-MI608	19990325
JP 2000302938	A2	20001031	JP 2000-82323	20000323
US 6500894	B1	20021231	US 2000-534153	20000324
PRIORITY APPLN. INFO.:			IT 1999-MI608	A 19990325

ED Entered STN: 29 Sep 2000

AB The title compns. are formed of aqueous dispersions comprising a mixture of **fluorinated** polymers of (A) (meth)acrylic (co)polymers containing F, and (B) cationic ionomers of **fluorinated polyurethanes** based on (**per**) **fluoropolyethers**, at A:B ratio 30-70:30-70. Thus, polyester cotton fabric was treated with 50/50 Scotchgard FX 3569 **fluoroacrylate** polymer and cationic butanediol-methyldiethanolamine-IPDI-**perfluoro** polyether diol copolymer.

REFERENCE COUNT: 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS  
RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

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LAST RELOADED: Jul 8, 2005 (20050708/UP).

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FILE 'HCAPLUS' ENTERED AT 15:55:02 ON 28 JUN 2005

L1 71 SEA ABB=ON PLU=ON TURRI, S?/AU  
L2 1284 SEA ABB=ON PLU=ON LEVI, M?/AU  
L3 23 SEA ABB=ON PLU=ON TROMBETTA, T?/AU  
L4 55 SEA ABB=ON PLU=ON (L1 OR L2 OR L3) AND ?URETHAN?  
L5 26 SEA ABB=ON PLU=ON L4 AND ?AUSIMONT?/OBI,CS,SO,PA  
L6 46 SEA ABB=ON PLU=ON (L1 OR L2 OR L3) AND (?FLUOR?(3A)?URETHAN?)  
  
L7 25 SEA ABB=ON PLU=ON L6 AND ?AUSIMONT?/OBI,CS,SO,A  
L8 25 SEA ABB=ON PLU=ON L6 AND ?AUSIMONT?/OBI,CS,SO,PA

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FILE 'REGISTRY' ENTERED AT 16:01:19 ON 28 JUN 2005

FILE 'HCAPLUS' ENTERED AT 16:01:23 ON 28 JUN 2005  
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L10 100 SEA ABB=ON PLU=ON L9  
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L11 4 SEA ABB=ON PLU=ON L10 AND F/ELS  
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SAVE TEMP L11 OH254REGINF/A

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E US2000-592254/APPS  
D SAVEDFILE 'STNGUIDE' ENTERED AT 16:07:52 ON 28 JUN 2005  
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D SCAN

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SAVE TEMP L13 OH154HCAAPP/A  
D IALL

FILE 'STNGUIDE' ENTERED AT 16:16:15 ON 28 JUN 2005

FILE 'REGISTRY' ENTERED AT 16:18:02 ON 28 JUN 2005

L14 FILE 'HCAPLUS' ENTERED AT 16:18:08 ON 28 JUN 2005  
TRA L13 1- RN : 8 TERMS

L15 FILE 'REGISTRY' ENTERED AT 16:18:12 ON 28 JUN 2005  
8 SEA ABB=ON PLU=ON L14  
SAVE TEMP L15 OH254REGAPP/A  
D SCAN

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D SAVED

FILE 'WPIX' ENTERED AT 16:21:24 ON 28 JUN 2005  
D CMC PLE

FILE 'STNGUIDE' ENTERED AT 16:21:25 ON 28 JUN 2005

FILE 'STNGUIDE' ENTERED AT 16:21:47 ON 28 JUN 2005

FILE HOME

FILE HCAPLUS

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FILE CONTAINS CURRENT INFORMATION.  
LAST RELOADED: Jun 24, 2005 (20050624/UP).

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Property values tagged with IC are from the ZIC/VINITI data file provided by InfoChem.

STRUCTURE FILE UPDATES: 27 JUN 2005 HIGHEST RN 853049-67-9  
DICTIONARY FILE UPDATES: 27 JUN 2005 HIGHEST RN 853049-67-9



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TSCA INFORMATION NOW CURRENT THROUGH JANUARY 18, 2005

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* available and contains the CA role and document type information. *
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information enter HELP PROP at an arrow prompt in the file or refer  
to the file summary sheet on the web at:  
<http://www.cas.org/ONLINE/DBSS/registryss.html>

FILE ZCAPLUS

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substance identification.

FILE WPIX  
FILE LAST UPDATED: 24 JUN 2005 <20050624/UP>  
MOST RECENT DERWENT UPDATE: 200540 <200540/DW>  
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PLEASE VISIT:  
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FOR DETAILS. <<<

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FILE 'STNGUIDE' ENTERED AT 08:49:58 ON 11 JUL 2005  
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E IT1999-MI1303/APPS  
E 2000:876782/AN  
E US2000-592254/APPS

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L2 FILE 'WPIX' ENTERED AT 08:54:05 ON 11 JUL 2005  
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D SCAN  
D TRI  
SAVE TEMP L2 OH254WPIAPP/A

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FILE 'REGISTRY' ENTERED AT 08:55:51 ON 11 JUL 2005

L3 FILE 'HCAPLUS' ENTERED AT 08:55:56 ON 11 JUL 2005  
TRA L1 1- RN : 8 TERMS

L4 FILE 'REGISTRY' ENTERED AT 08:56:01 ON 11 JUL 2005  
8 SEA ABB=ON PLU=ON L3  
SAVE TEMP L4 OH254REGAPP/A  
D SCAN

FILE 'STNGUIDE' ENTERED AT 08:56:26 ON 11 JUL 2005  
D SAVED

L5 FILE 'REGISTRY' ENTERED AT 09:01:39 ON 11 JUL 2005  
2 SEA ABB=ON PLU=ON L4 AND PMS/CI  
D SCAN  
SAVE TEMP L5 OH254REGPOL/A

FILE 'STNGUIDE' ENTERED AT 09:02:31 ON 11 JUL 2005  
D SAVED

FILE 'HCAPLUS' ENTERED AT 09:03:56 ON 11 JUL 2005

FILE 'REGISTRY' ENTERED AT 09:04:00 ON 11 JUL 2005  
D QUE L5  
D IDERL L5 1-2

FILE 'STNGUIDE' ENTERED AT 09:04:26 ON 11 JUL 2005

FILE 'HCAPLUS' ENTERED AT 09:07:59 ON 11 JUL 2005  
S ( 313273-48-2/REG# OR 313273-48-2D? OR 313273-48-2P?)

L6 FILE 'REGISTRY' ENTERED AT 09:08:05 ON 11 JUL 2005  
1 SEA ABB=ON PLU=ON 313273-48-2/RN

L7 FILE 'HCAPLUS' ENTERED AT 09:08:05 ON 11 JUL 2005  
1 SEA ABB=ON PLU=ON L6

L8 1 SEA ABB=ON PLU=ON ( L7 OR 313273-48-2D? OR 313273-48-2P?)  
S ( 138861-14-0/REG# OR 138861-14-0D? OR 138861-14-0P?)

L9 FILE 'REGISTRY' ENTERED AT 09:08:18 ON 11 JUL 2005  
1 SEA ABB=ON PLU=ON 138861-14-0/RN

L10 FILE 'HCAPLUS' ENTERED AT 09:08:18 ON 11 JUL 2005  
35 SEA ABB=ON PLU=ON L9

L11 35 SEA ABB=ON PLU=ON ( L10 OR 138861-14-0D? OR 138861-14-0P?)

FILE 'STNGUIDE' ENTERED AT 09:08:26 ON 11 JUL 2005

L12 FILE 'HCAPLUS' ENTERED AT 09:09:26 ON 11 JUL 2005  
QUE ABB=ON PLU=ON ?FLUORO? OR ?FLUORIN? OR ?PERFLUORO? OR  
?PERFLUORIN? OR (PER(1W)FLUORO?) OR (PER(1W)FLUORIN?)

L13 2 SEA ABB=ON PLU=ON L11 (L) L12

FILE 'ZCAPLUS' ENTERED AT 09:10:11 ON 11 JUL 2005  
E POLYURETHANES/CT  
E FLUOROPOLYMERS/CT  
E OLIGOURETHANES/CT

FILE 'STNGUIDE' ENTERED AT 09:11:38 ON 11 JUL 2005

L14 FILE 'HCAPLUS' ENTERED AT 09:14:03 ON 11 JUL 2005  
QUE ABB=ON PLU=ON ?URETHAN? OR ?POLYURETHAN? OR (POLY?(1W)?UR  
ETHAN?) OR ?OLIGOURETHAN? OR (OLIGO?(1W)?URETHAN?)

L15 QUE ABB=ON PLU=ON ?ISOCYANAT? OR (ISO(1W)CYANAT?) OR  
?ISOCYANURAT? OR (ISO(1W)CYANURAT?)  
SAVE TEMP L12 QUEFLUOR/Q  
SAVE TEMP L14 QUEURETHAN/Q  
SAVE TEMP L15 QUEISOCYANAT/Q

L16 119618 SEA ABB=ON PLU=ON POLYURETHANES+PFT/CT

L17 2232 SEA ABB=ON PLU=ON L16 (L) L12

L18 62806 SEA ABB=ON PLU=ON FLUOROPOLYMERS+PFT/CT

L19 1105 SEA ABB=ON PLU=ON L18(L) L14

L\*\*\* FILE 'STNGUIDE' ENTERED AT 09:17:02 ON 11 JUL 2005  
DEL 0 S (L17 OR L19) (L) L15

L20 FILE 'HCAPLUS' ENTERED AT 09:17:58 ON 11 JUL 2005  
134 SEA ABB=ON PLU=ON (L17 OR L19) (L) L15

FILE 'ZCAPLUS' ENTERED AT 09:18:45 ON 11 JUL 2005

E FILMS/CT  
E COATINGS/CT  
E E99+ALL  
E POLYURETHANES/CT  
E E113+PFT  
E FLUOROPOLYMERS/CT  
E E128+PFT/CT  
E COATING MATERIALS/CT  
E E147+PFT  
E FILMS  
E FILMS/CT  
E E188+PFT/CT

FILE 'HCAPLUS' ENTERED AT 09:22:01 ON 11 JUL 2005

L21 118747 SEA ABB=ON PLU=ON "URETHANE POLYMERS"+PFT,NT/CT  
L22 53401 SEA ABB=ON PLU=ON "URETHAN POLYMERS"+PFT,NT/CT  
L23 2232 SEA ABB=ON PLU=ON (L21 OR L22) (L) L12  
L24 62806 SEA ABB=ON PLU=ON FLUOROPLASTS+PFT,NT/CT  
L25 1105 SEA ABB=ON PLU=ON L24 (L) L14  
L26 134 SEA ABB=ON PLU=ON (L23 OR L25) (L) L15  
L27 134 SEA ABB=ON PLU=ON L20 OR L26  
L28 218843 SEA ABB=ON PLU=ON FILMS+PFT,NT/CT  
L29 270449 SEA ABB=ON PLU=ON COATINGS+PFT,NT/CT  
L30 374794 SEA ABB=ON PLU=ON "COATING MATERIALS"+PFT,NT/CT  
L31 298475 SEA ABB=ON PLU=ON "COATING(S)" +PFT,NT/CT  
L32 262728 SEA ABB=ON PLU=ON "COATING MATERIALS (L) HARD"+PFT,NT/CT  
L33 40 SEA ABB=ON PLU=ON L27 AND (L28 OR L29 OR L30 OR L31 OR L32)

FILE 'STNGUIDE' ENTERED AT 09:25:46 ON 11 JUL 2005

FILE 'HCAPLUS' ENTERED AT 09:29:25 ON 11 JUL 2005

L34 QUE ABB=ON PLU=ON WATER OR H2O OR HYDRO OR MOISTURE  
SAVE TEMP L34 QUEH2O/Q  
L35 QUE ABB=ON PLU=ON OIL OR GREASE OR LIPID OR FAT  
SAVE TEMP L35 QUEOIL/Q  
L36 QUE ABB=ON PLU=ON ?PROOF? OR ?REPEL? OR ?RESIST?  
SAVE TEMP L36 QUEREPEL/Q  
L37 83954 SEA ABB=ON PLU=ON L34 (1A) L36  
L38 33856 SEA ABB=ON PLU=ON ?WATERPROOF?  
L39 15181 SEA ABB=ON PLU=ON L35 (1A) L36  
L40 3499 SEA ABB=ON PLU=ON ?OILPROOF?  
L41 8 SEA ABB=ON PLU=ON L33 AND (L37 OR L38)  
L42 4 SEA ABB=ON PLU=ON L33 AND (L39 OR L40)  
L43 40 SEA ABB=ON PLU=ON L33 OR L41 OR L42  
L44 22 SEA ABB=ON PLU=ON L43 AND (AY<2000 OR PY<2000 OR PRY<2000)  
SAVE TEMP L44 OH254HCA1B/A  
L45 18 SEA ABB=ON PLU=ON L43 NOT L44  
SAVE TEMP L45 OH254HCA1A/A

FILE 'STNGUIDE' ENTERED AT 09:35:01 ON 11 JUL 2005

D SAVED

FILE 'HCAPLUS' ENTERED AT 09:35:47 ON 11 JUL 2005

L46 74 SEA ABB=ON PLU=ON L33 OR L9 OR L13  
D QUE L43  
L47 40 SEA ABB=ON PLU=ON L46 AND (L20 OR L27)  
L48 40 SEA ABB=ON PLU=ON L47 AND L43  
L49 22 SEA ABB=ON PLU=ON L44 AND L48

L50           SAVE TEMP L49 OH254HCA2B/A  
              18 SEA ABB=ON PLU=ON L48 AND L45  
              SAVE TEMP L50 OH254HCA2A/A

FILE 'STNGUIDE' ENTERED AT 09:39:10 ON 11 JUL 2005  
D SAVED

FILE 'HCAPLUS' ENTERED AT 09:40:15 ON 11 JUL 2005  
L51           22 SEA ABB=ON PLU=ON L44 AND L49  
L52           18 SEA ABB=ON PLU=ON L45 AND L50

FILE 'STNGUIDE' ENTERED AT 09:40:29 ON 11 JUL 2005

FILE 'WPIX' ENTERED AT 10:02:41 ON 11 JUL 2005  
L53           30724 SEA ABB=ON PLU=ON C08G018?/IPC  
L54           22557 SEA ABB=ON PLU=ON (C09D175? OR C08L075?)/IPC  
L55           92448 SEA ABB=ON PLU=ON (A05-G? OR A12-B01K OR A12-B01 OR A12-B01A  
              OR A12-B01B OR G02-A02H OR G02-A02B)/MC  
L56           10935 SEA ABB=ON PLU=ON L53 AND L54  
L57           96793 SEA ABB=ON PLU=ON L56 OR L55  
L58           2140 SEA ABB=ON PLU=ON (?FLUORO?/BIX OR ?FLUORIN?/BIX OR ?PERFLUOR  
              O?/BIX OR ?PERFLUORIN?/BIX OR (PER/BIX(1W)FLUORO?/BIX) OR  
              (PER/BIX(1W)FLUORIN?/BIX)) (2A) (?URETHAN?/BIX OR ?POLYURETHAN?  
              /BIX OR (POLY?/BIX(1W)?URETHAN?/BIX) OR ?OLIGOURETHAN?/BIX OR  
              (OLIGO?/BIX(1W)?URETHAN?/BIX))  
L59           510 SEA ABB=ON PLU=ON L57 AND L58  
L60           125 SEA ABB=ON PLU=ON L59 AND ((WATERPROOF? OR OILPROOF?)/BIX OR  
              ((WATER/BIX OR H2O/BIX OR HYDRO/BIX OR MOISTURE/BIX) OR  
              (OIL/BIX OR GREASE/BIX OR LIPID/BIX OR FAT/BIX)) (3A) (?PROOF?/BI  
              X OR ?REPEL?/BIX OR ?RESIST?/BIX))  
              D QUE  
              D TRI 1-3  
L61           27 SEA ABB=ON PLU=ON L60 AND L53 AND L54 AND L55  
              SAVE TEMP L60 OH254WPIP1/A  
              SAVE TEMP L61 OH254WPIR1/A

FILE 'STNGUIDE' ENTERED AT 10:19:17 ON 11 JUL 2005  
D SAVED

FILE 'WPIX' ENTERED AT 10:20:04 ON 11 JUL 2005  
D TRI L61 1-27  
L62           1 SEA ABB=ON PLU=ON L61 AND L2

FILE 'STNGUIDE' ENTERED AT 10:20:38 ON 11 JUL 2005

FILE HOME

FILE STNGUIDE  
FILE CONTAINS CURRENT INFORMATION.  
LAST RELOADED: Jul 8, 2005 (20050708/UP).

FILE ZCAPLUS

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FILE LAST UPDATED: 10 Jul 2005 (20050710/ED)

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FILE COVERS 1907 - 11 Jul 2005 VOL 143 ISS 3  
FILE LAST UPDATED: 10 Jul 2005 (20050710/ED)

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#### FILE WPIX

FILE LAST UPDATED: 7 JUL 2005 <20050707/UP>  
MOST RECENT DERWENT UPDATE: 200543 <200543/DW>  
DERWENT WORLD PATENTS INDEX SUBSCRIBER FILE, COVERS 1963 TO DATE

>>> FOR A COPY OF THE DERWENT WORLD PATENTS INDEX STN USER GUIDE,  
PLEASE VISIT:  
[http://www.stn-international.de/training\\_center/patents/stn\\_guide.pdf](http://www.stn-international.de/training_center/patents/stn_guide.pdf) <<<

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GUIDES, PLEASE VISIT:  
<http://thomsonderwent.com/support/userguides/> <<<

>>> NEW! FAST-ALERTING ACCESS TO NEWLY-PUBLISHED PATENT  
DOCUMENTATION NOW AVAILABLE IN DERWENT WORLD PATENTS INDEX  
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>>> THE CPI AND EPI MANUAL CODES HAVE BEEN REVISED FROM UPDATE 200501.  
PLEASE CHECK:  
<http://thomsonderwent.com/support/dwpioref/reftools/classification/code-rev>  
FOR DETAILS. <<<

## FILE REGISTRY

Property values tagged with IC are from the ZIC/VINITI data file provided by InfoChem.

STRUCTURE FILE UPDATES: 10 JUL 2005 HIGHEST RN 854370-36-8

DICTIONARY FILE UPDATES: 10 JUL 2005 HIGHEST RN 854370-36-8

New CAS Information Use Policies, enter HELP USAGETERMS for details.

TSCA INFORMATION NOW CURRENT THROUGH JANUARY 18, 2005

Please note that search-term pricing does apply when conducting SmartSELECT searches.

```
*****
*
* The CA roles and document type information have been removed from *
* the IDE default display format and the ED field has been added, *
* effective March 20, 2005. A new display format, IDERL, is now *
* available and contains the CA role and document type information. *
*
*****
```

Crossover limits have been increased. See HELP CROSSOVER for details.

Experimental and calculated property data are now available. For more information enter HELP PROP at an arrow prompt in the file or refer to the file summary sheet on the web at:

<http://www.cas.org/ONLINE/DBSS/registryss.html>

=> => d que l51

```
L12 (      1)SEA FILE=REGISTRY ABB=ON  PLU=ON  138861-14-0/RN
L13 (      35)SEA FILE=HCAPLUS ABB=ON  PLU=ON  L12
L14 (      35)SEA FILE=HCAPLUS ABB=ON  PLU=ON  ( L13 OR 138861-14-0D? OR
      138861-14-0P?)
L15      QUE ABB=ON  PLU=ON  ?FLUORO? OR ?FLUORIN? OR ?PERFLUORO?
      OR ?PERFLUORIN? OR (PER(1W)FLUORO?) OR (PER(1W)FLUORIN?)
L16 (      2)SEA FILE=HCAPLUS ABB=ON  PLU=ON  L14 (L) L15
L17      QUE ABB=ON  PLU=ON  ?URETHAN? OR ?POLYURETHAN? OR (POLY?
      (1W)?URETHAN?) OR ?OLIGOURETHAN? OR (OLIGO?(1W)?URETHAN?)
L18      QUE ABB=ON  PLU=ON  ?ISOCYANAT? OR (ISO(1W)CYANAT?) OR ?
      ISOCYANURAT? OR (ISO(1W)CYANURAT?)
L19 (    119618)SEA FILE=HCAPLUS ABB=ON  PLU=ON  POLYURETHANES+PFT/CT
L20 (      2232)SEA FILE=HCAPLUS ABB=ON  PLU=ON  L19 (L) L15
L21 (      62806)SEA FILE=HCAPLUS ABB=ON  PLU=ON  FLUOROPOLYMERS+PFT/CT
L22 (      1105)SEA FILE=HCAPLUS ABB=ON  PLU=ON  L21(L)L17
L23 (      134)SEA FILE=HCAPLUS ABB=ON  PLU=ON  (L20 OR L22) (L) L18
L24 (    118747)SEA FILE=HCAPLUS ABB=ON  PLU=ON  "URETHANE POLYMERS"+PFT,NT/CT

L25 (      53401)SEA FILE=HCAPLUS ABB=ON  PLU=ON  "URETHAN POLYMERS"+PFT,NT/CT
L26 (      2232)SEA FILE=HCAPLUS ABB=ON  PLU=ON  (L24 OR L25) (L) L15
L27 (      62806)SEA FILE=HCAPLUS ABB=ON  PLU=ON  FLUOROPLASTS+PFT,NT/CT
L28 (      1105)SEA FILE=HCAPLUS ABB=ON  PLU=ON  L27 (L) L17
L29 (      134)SEA FILE=HCAPLUS ABB=ON  PLU=ON  (L26 OR L28) (L) L18
L30 (      134)SEA FILE=HCAPLUS ABB=ON  PLU=ON  L23 OR L29
L31 (    218843)SEA FILE=HCAPLUS ABB=ON  PLU=ON  FILMS+PFT,NT/CT
L32 (    270449)SEA FILE=HCAPLUS ABB=ON  PLU=ON  COATINGS+PFT,NT/CT
L33 (    374794)SEA FILE=HCAPLUS ABB=ON  PLU=ON  "COATING MATERIALS"+PFT,NT/CT
```

L34 ( 298475)SEA FILE=HCAPLUS ABB=ON PLU=ON "COATING(S)" +PFT,NT/CT  
 L35 ( 262728)SEA FILE=HCAPLUS ABB=ON PLU=ON "COATING MATERIALS (L)  
 HARD"+PFT,NT/CT  
 L36 ( 40)SEA FILE=HCAPLUS ABB=ON PLU=ON L30 AND (L31 OR L32 OR L33 OR  
 L34 OR L35)  
 L37 QUE ABB=ON PLU=ON WATER OR H2O OR HYDRO OR MOISTURE  
 L38 QUE ABB=ON PLU=ON OIL OR GREASE OR LIPID OR FAT  
 L39 QUE ABB=ON PLU=ON ?PROOF? OR ?REPEL? OR ?RESIST?  
 L40 ( 83954)SEA FILE=HCAPLUS ABB=ON PLU=ON L37(1A)L39  
 L41 ( 33856)SEA FILE=HCAPLUS ABB=ON PLU=ON ?WATERPROOF?  
 L42 ( 15181)SEA FILE=HCAPLUS ABB=ON PLU=ON L38 (1A) L39  
 L43 ( 3499)SEA FILE=HCAPLUS ABB=ON PLU=ON ?OILPROOF?  
 L44 ( 8)SEA FILE=HCAPLUS ABB=ON PLU=ON L36 AND (L40 OR L41)  
 L45 ( 4)SEA FILE=HCAPLUS ABB=ON PLU=ON L36 AND (L42 OR L43)  
 L46 ( 40)SEA FILE=HCAPLUS ABB=ON PLU=ON L36 OR L44 OR L45  
 L47 ( 22)SEA FILE=HCAPLUS ABB=ON PLU=ON L46 AND (AY<2000 OR PY<2000  
 OR PRY<2000)  
 L48 ( 74)SEA FILE=HCAPLUS ABB=ON PLU=ON L36 OR L12 OR L16  
 L49 ( 40)SEA FILE=HCAPLUS ABB=ON PLU=ON L48 AND (L23 OR L30)  
 L50 ( 40)SEA FILE=HCAPLUS ABB=ON PLU=ON L49 AND L46  
 L51 22 SEA FILE=HCAPLUS ABB=ON PLU=ON L47 AND L50

=> d que 110

L1 ( 30724)SEA FILE=WPIX ABB=ON PLU=ON C08G018?/IPC  
 L2 ( 22557)SEA FILE=WPIX ABB=ON PLU=ON (C09D175? OR C08L075?)/IPC  
 L3 ( 92448)SEA FILE=WPIX ABB=ON PLU=ON (A05-G? OR A12-B01K OR A12-B01  
 OR A12-B01A OR A12-B01B OR G02-A02H OR G02-A02B)/MC  
 L4 ( 10935)SEA FILE=WPIX ABB=ON PLU=ON L1 AND L2  
 L5 ( 96793)SEA FILE=WPIX ABB=ON PLU=ON L4 OR L3  
 L6 ( 2140)SEA FILE=WPIX ABB=ON PLU=ON (?FLUORO?/BIX OR ?FLUORIN?/BIX  
 OR ?PERFLUORO?/BIX OR ?PERFLUORIN?/BIX OR (PER/BIX(1W)FLUORO?/B  
 IX) OR (PER/BIX(1W)FLUORIN?/BIX)) (2A) (?URETHAN?/BIX OR  
 ?POLYURETHAN?/BIX OR (POLY?/BIX(1W)?URETHAN?/BIX) OR ?OLIGOURET  
 HAN?/BIX OR (OLIGO?/BIX(1W)?URETHAN?/BIX))  
 L7 ( 510)SEA FILE=WPIX ABB=ON PLU=ON L5 AND L6  
 L8 ( 125)SEA FILE=WPIX ABB=ON PLU=ON L7 AND ((WATERPROOF? OR OILPROOF?  
 )/BIX OR (((WATER/BIX OR H2O/BIX OR HYDRO/BIX OR MOISTURE/BIX)  
 OR (OIL/BIX OR GREASE/BIX OR LIPID/BIX OR FAT/BIX)) (3A) (?PROOF?  
 /BIX OR ?REPEL?/BIX OR ?RESIST?/BIX)))  
 L9 27 SEA FILE=WPIX ABB=ON PLU=ON L8 AND L1 AND L2 AND L3  
 L10 16 SEA FILE=WPIX ABB=ON PLU=ON L9 AND (AY<2000 OR PY<2000 OR  
 PRY<2000)

=> d que 198

L93 ( 1)SEA FILE=HCAPLUS ABB=ON PLU=ON "2000:876782"/AN  
 L94 SEL PLU=ON L93 1- RN : 8 TERMS  
 L95 ( 8)SEA FILE=REGISTRY ABB=ON PLU=ON L94  
 L96 2 SEA FILE=REGISTRY ABB=ON PLU=ON L95 AND PMS/CI  
 L97 40 SEA FILE=USPATFULL ABB=ON PLU=ON L96  
 L98 1 SEA FILE=USPATFULL ABB=ON PLU=ON L97 AND ((?FLUORO?/BI,IT,AB  
 OR ?FLUORIN?/BI,IT,AB OR ?PERFLUORO?/BI,IT,AB OR ?PERFLUORIN?/B  
 I,IT,AB OR (PER/BI,IT,AB(1W)FLUORO?/BI,IT,AB) OR (PER/BI,IT,AB(1  
 W)FLUORIN?/BI,IT,AB)) (3A) (?URETHAN?/BI,IT,AB OR ?POLYURETHAN  
 ?/BI,IT,AB OR (POLY?/BI,IT,AB(1W)?URETHAN?/BI,IT,AB) OR  
 ?OLIGOURETHAN?/BI,IT,AB OR (OLIGO?/BI,IT,AB(1W)?URETHAN?/BI,IT,  
 AB)))



=&gt; d que 1103

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L55      QUE ABB=ON  PLU=ON  ?FLUORO? OR ?FLUORIN? OR ?PERFLUORO?
        OR ?PERFLUORIN? OR (PER(1W)FLUORO?) OR (PER(1W)FLUORIN?)
L57      QUE ABB=ON  PLU=ON  ?URETHAN? OR ?POLYURETHAN? OR (POLY?
        (1W)?URETHAN?) OR ?OLIGOURETHAN? OR (OLIGO?(1W)?URETHAN?)
L58      QUE ABB=ON  PLU=ON  ?ISOCYANAT? OR (ISO(1W)CYANAT?) OR ?
        ISOCYANURAT? OR (ISO(1W)CYANURAT?)
L77      QUE ABB=ON  PLU=ON  WATER OR H2O OR HYDRO OR MOISTURE
L78      QUE ABB=ON  PLU=ON  OIL OR GREASE OR LIPID OR FAT
L79      QUE ABB=ON  PLU=ON  ?PROOF? OR ?REPEL? OR ?RESIST?
L99      1277 SEA L55 (3A) L57
L100     336 SEA L99 AND L58
L101     37 SEA L100 AND (?WATERPROOF? OR ?OILPROOF? OR ((L77 OR L78) (2A)
        L79))
L102     37 DUP REM L101 (0 DUPLICATES REMOVED)
L103     7 SEA L102 AND (AY<2000 OR PY<2000 OR PRY<2000 OR MY<2000)

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=&gt; d que 1112

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L55      QUE ABB=ON  PLU=ON  ?FLUORO? OR ?FLUORIN? OR ?PERFLUORO?
        OR ?PERFLUORIN? OR (PER(1W)FLUORO?) OR (PER(1W)FLUORIN?)
L77      QUE ABB=ON  PLU=ON  WATER OR H2O OR HYDRO OR MOISTURE
L78      QUE ABB=ON  PLU=ON  OIL OR GREASE OR LIPID OR FAT
L79      QUE ABB=ON  PLU=ON  ?PROOF? OR ?REPEL? OR ?RESIST?
L105     292 SEA TURRI, S?/AU
L106     5822 SEA LEVI, M?/AU
L107     80 SEA TROMBETTA, T?/AU
L108     196 SEA (L105 OR L106 OR L107) AND (?URETHAN? OR ?POLYURETHAN? OR
        ?OLIGOURETHAN?)
L109     86 DUP REM L108 (110 DUPLICATES REMOVED)
L110     44 'SEA L109 AND ?AUSIMONT?/PA,CS,SO,IN,BI
L111     43 SEA L110 AND L55
L112     5 SEA L111 AND (?WATERPROOF? OR ?OILPROOF? OR ((L77 OR L78) (3A)
        L79))

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=&gt; d his ful

(FILE 'HOME' ENTERED AT 11:56:32 ON 11 JUL 2005)

FILE 'STNGUIDE' ENTERED AT 11:56:46 ON 11 JUL 2005

FILE 'WPIX' ENTERED AT 11:59:09 ON 11 JUL 2005

ACT OH254WPIR1/A

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L1 (      30724)SEA ABB=ON  PLU=ON  C08G018?/IPC
L2 (      22557)SEA ABB=ON  PLU=ON  (C09D175? OR C08L075?)/IPC
L3 (      92448)SEA ABB=ON  PLU=ON  (A05-G? OR A12-B01K OR A12-B01 OR A12-B01A
        OR A12-B01B OR G02-A02H OR G02-A02B)/MC
L4 (      10935)SEA ABB=ON  PLU=ON  L1 AND L2
L5 (      96793)SEA ABB=ON  PLU=ON  L4 OR L3
L6 (      2140)SEA ABB=ON  PLU=ON  (?FLUORO?/BIX OR ?FLUORIN?/BIX OR ?PERFLUOR
        O?/BIX OR ?PERFLUORIN?/BIX OR (PER/BIX(1W)FLUORO?/BIX) OR
        (PER/BIX(1W)FLUORIN?/BIX)) (2A) (?URETHAN?/BIX OR ?POLYURETHAN?
        /BIX OR (POLY?/BIX(1W)?URETHAN?/BIX) OR ?OLIGOURETHAN?/BIX OR
        (OLIGO?/BIX(1W)?URETHAN?/BIX))
L7 (      510)SEA ABB=ON  PLU=ON  L5 AND L6
L8 (      125)SEA ABB=ON  PLU=ON  L7 AND ((WATERPROOF? OR OILPROOF?)/BIX OR

```

((WATER/BIX OR H2O/BIX OR HYDRO/BIX OR MOISTURE/BIX) OR  
(OIL/BIX OR GREASE/BIX OR LIPID/BIX OR FAT/BIX)) (3A) (?PROOF?/BI  
X OR ?REPEL?/BIX OR ?RESIST?/BIX)))

L9 27 SEA ABB=ON PLU=ON L8 AND L1 AND L2 AND L3

L10 16 SEA ABB=ON PLU=ON L9 AND (AY<2000 OR PY<2000 OR PRY<2000)  
SAVE TEMP L10 OH254WPI1B/A

L11 11 SEA ABB=ON PLU=ON L9 NOT L10  
SAVE TEMP L11 OH254WPI1A/A

FILE 'STNGUIDE' ENTERED AT 12:13:00 ON 11 JUL 2005  
D SAVED

FILE 'HCAPLUS' ENTERED AT 12:13:23 ON 11 JUL 2005  
ACT OH254HCA2B/A

L12 ( 1)SEA ABB=ON PLU=ON 138861-14-0/RN  
L13 ( 35)SEA ABB=ON PLU=ON L12  
L14 ( 35)SEA ABB=ON PLU=ON ( L13 OR 138861-14-0D? OR 138861-14-0P?)  
L15 QUE ABB=ON PLU=ON ?FLUORO? OR ?FLUORIN? OR ?PERFLUORO? OR  
?PERFLUORIN? OR (PER(1W)FLUORO?) OR (PER(1W)FLUORIN?)  
L16 ( 2)SEA ABB=ON PLU=ON L14 (L) L15  
L17 QUE ABB=ON PLU=ON ?URETHAN? OR ?POLYURETHAN? OR (POLY?(1W)?UR  
ETHAN?) OR ?OLIGOURETHAN? OR (OLIGO?(1W)?URETHAN?)  
L18 QUE ABB=ON PLU=ON ?ISOCYANAT? OR (ISO(1W)CYANAT?) OR  
?ISOCYANURAT? OR (ISO(1W)CYANURAT?)  
L19 ( 119618)SEA ABB=ON PLU=ON POLYURETHANES+PFT/CT  
L20 ( 2232)SEA ABB=ON PLU=ON L19 (L) L15  
L21 ( 62806)SEA ABB=ON PLU=ON FLUOROPOLYMERS+PFT/CT  
L22 ( 1105)SEA ABB=ON PLU=ON L21(L) L17  
L23 ( 134)SEA ABB=ON PLU=ON (L20 OR L22) (L) L18  
L24 ( 118747)SEA ABB=ON PLU=ON "URETHANE POLYMERS"+PFT,NT/CT  
L25 ( 53401)SEA ABB=ON PLU=ON "URETHAN POLYMERS"+PFT,NT/CT  
L26 ( 2232)SEA ABB=ON PLU=ON (L24 OR L25) (L) L15  
L27 ( 62806)SEA ABB=ON PLU=ON FLUOROPLASTS+PFT,NT/CT  
L28 ( 1105)SEA ABB=ON PLU=ON L27 (L) L17  
L29 ( 134)SEA ABB=ON PLU=ON (L26 OR L28) (L) L18  
L30 ( 134)SEA ABB=ON PLU=ON L23 OR L29  
L31 ( 218843)SEA ABB=ON PLU=ON FILMS+PFT,NT/CT  
L32 ( 270449)SEA ABB=ON PLU=ON COATINGS+PFT,NT/CT  
L33 ( 374794)SEA ABB=ON PLU=ON "COATING MATERIALS"+PFT,NT/CT  
L34 ( 298475)SEA ABB=ON PLU=ON "COATING(S)"+PFT,NT/CT  
L35 ( 262728)SEA ABB=ON PLU=ON "COATING MATERIALS (L) HARD"+PFT,NT/CT  
L36 ( 40)SEA ABB=ON PLU=ON L30 AND (L31 OR L32 OR L33 OR L34 OR L35)  
L37 QUE ABB=ON PLU=ON WATER OR H2O OR HYDRO OR MOISTURE  
L38 QUE ABB=ON PLU=ON OIL OR GREASE OR LIPID OR FAT  
L39 QUE ABB=ON PLU=ON ?PROOF? OR ?REPEL? OR ?RESIST?  
L40 ( 83954)SEA ABB=ON PLU=ON L37(1A) L39  
L41 ( 33856)SEA ABB=ON PLU=ON ?WATERPROOF?  
L42 ( 15181)SEA ABB=ON PLU=ON L38 (1A) L39  
L43 ( 3499)SEA ABB=ON PLU=ON ?OILPROOF?  
L44 ( 8)SEA ABB=ON PLU=ON L36 AND (L40 OR L41)  
L45 ( 4)SEA ABB=ON PLU=ON L36 AND (L42 OR L43)  
L46 ( 40)SEA ABB=ON PLU=ON L36 OR L44 OR L45  
L47 ( 22)SEA ABB=ON PLU=ON L46 AND (AY<2000 OR PY<2000 OR PRY<2000)  
L48 ( 74)SEA ABB=ON PLU=ON L36 OR L12 OR L16  
L49 ( 40)SEA ABB=ON PLU=ON L48 AND (L23 OR L30)  
L50 ( 40)SEA ABB=ON PLU=ON L49 AND L46  
L51 22 SEA ABB=ON PLU=ON L47 AND L50

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 ACT OH254HCA2A/A  
 -----

L52 ( 1) SEA ABB=ON PLU=ON 138861-14-0/RN  
 L53 ( 35) SEA ABB=ON PLU=ON L52  
 L54 ( 35) SEA ABB=ON PLU=ON ( L53 OR 138861-14-0D? OR 138861-14-0P?)  
 L55 QUE ABB=ON PLU=ON ?FLUORO? OR ?FLUORIN? OR ?PERFLUORO? OR  
 ?PERFLUORIN? OR (PER(1W)FLUORO?) OR (PER(1W)FLUORIN?)  
 L56 ( 2) SEA ABB=ON PLU=ON L54 (L) L55  
 L57 QUE ABB=ON PLU=ON ?URETHAN? OR ?POLYURETHAN? OR (POLY?(1W)?UR  
 ETHAN?) OR ?OLIGOURETHAN? OR (OLIGO?(1W)?URETHAN?)  
 L58 QUE ABB=ON PLU=ON ?ISOCYANAT? OR (ISO(1W)CYANAT?) OR  
 ?ISOCYANURAT? OR (ISO(1W)CYANURAT?)  
 L59 ( 119618) SEA ABB=ON PLU=ON POLYURETHANES+PFT/CT  
 L60 ( 2232) SEA ABB=ON PLU=ON L59 (L) L55  
 L61 ( 62806) SEA ABB=ON PLU=ON FLUOROPOLYMERS+PFT/CT  
 L62 ( 1105) SEA ABB=ON PLU=ON L61(L) L57  
 L63 ( 134) SEA ABB=ON PLU=ON (L60 OR L62) (L) L58  
 L64 ( 118747) SEA ABB=ON PLU=ON "URETHANE POLYMERS"+PFT,NT/CT  
 L65 ( 53401) SEA ABB=ON PLU=ON "URETHAN POLYMERS"+PFT,NT/CT  
 L66 ( 2232) SEA ABB=ON PLU=ON (L64 OR L65) (L) L55  
 L67 ( 62806) SEA ABB=ON PLU=ON FLUOROPLASTS+PFT,NT/CT  
 L68 ( 1105) SEA ABB=ON PLU=ON L67 (L) L57  
 L69 ( 134) SEA ABB=ON PLU=ON (L66 OR L68) (L) L58  
 L70 ( 134) SEA ABB=ON PLU=ON L63 OR L69  
 L71 ( 218843) SEA ABB=ON PLU=ON FILMS+PFT,NT/CT  
 L72 ( 270449) SEA ABB=ON PLU=ON COATINGS+PFT,NT/CT  
 L73 ( 374794) SEA ABB=ON PLU=ON "COATING MATERIALS"+PFT,NT/CT  
 L74 ( 298475) SEA ABB=ON PLU=ON "COATING(S)"+PFT,NT/CT  
 L75 ( 262728) SEA ABB=ON PLU=ON "COATING MATERIALS (L) HARD"+PFT,NT/CT  
 L76 ( 40) SEA ABB=ON PLU=ON L70 AND (L71 OR L72 OR L73 OR L74 OR L75)  
 L77 QUE ABB=ON PLU=ON WATER OR H2O OR HYDRO OR MOISTURE  
 L78 QUE ABB=ON PLU=ON OIL OR GREASE OR LIPID OR FAT  
 L79 QUE ABB=ON PLU=ON ?PROOF? OR ?REPEL? OR ?RESIST?  
 L80 ( 83954) SEA ABB=ON PLU=ON L77(1A) L79  
 L81 ( 33856) SEA ABB=ON PLU=ON ?WATERPROOF?  
 L82 ( 15181) SEA ABB=ON PLU=ON L78 (1A) L79  
 L83 ( 3499) SEA ABB=ON PLU=ON ?OILPROOF?  
 L84 ( 8) SEA ABB=ON PLU=ON L76 AND (L80 OR L81)  
 L85 ( 4) SEA ABB=ON PLU=ON L76 AND (L82 OR L83)  
 L86 ( 40) SEA ABB=ON PLU=ON L76 OR L84 OR L85  
 L87 ( 22) SEA ABB=ON PLU=ON L86 AND (AY<2000 OR PY<2000 OR PRY<2000)  
 L88 ( 18) SEA ABB=ON PLU=ON L86 NOT L87  
 L89 ( 74) SEA ABB=ON PLU=ON L76 OR L52 OR L56  
 L90 ( 40) SEA ABB=ON PLU=ON L89 AND (L63 OR L70)  
 L91 ( 40) SEA ABB=ON PLU=ON L90 AND L86  
 L92 18 SEA ABB=ON PLU=ON L91 AND L88  
 -----

FILE 'STNGUIDE' ENTERED AT 12:14:13 ON 11 JUL 2005

FILE 'REGISTRY' ENTERED AT 12:14:59 ON 11 JUL 2005

ACT OH254REGPOL/A  
 -----

L93 ( 1) SEA ABB=ON PLU=ON "2000:876782"/AN  
 L94 SEL PLU=ON L93 1- RN : 8 TERMS  
 L95 ( 8) SEA ABB=ON PLU=ON L94  
 L96 2 SEA ABB=ON PLU=ON L95 AND PMS/CI  
 -----

FILE 'USPATFULL' ENTERED AT 12:15:21 ON 11 JUL 2005

L97 40 SEA ABB=ON PLU=ON L96  
L98 1 SEA ABB=ON PLU=ON L97 AND ((?FLUORO?/BI,IT,AB OR ?FLUORIN?/BI,IT,AB OR ?PERFLUORO?/BI,IT,AB OR ?PERFLUORIN?/BI,IT,AB OR (PER/BI,IT,AB(1W)FLUORO?/BI,IT,AB) OR (PER/BI,IT,AB(1W)FLUORIN?/BI,IT,AB)) (3A) (?URETHAN?/BI,IT,AB OR ?POLYURETHAN?/BI,IT,AB OR (POLY?/BI,IT,AB(1W)?URETHAN?/BI,IT,AB) OR ?OLIGOURETHAN?/BI,IT,AB OR (OLIGO?/BI,IT,AB(1W)?URETHAN?/BI,IT,AB)))  
D SCAN  
SAVE TEMP L98 OH254USP1/A

FILE 'STNGUIDE' ENTERED AT 12:17:06 ON 11 JUL 2005

FILE 'MEDLINE, BIOSIS, PASCAL, JICST-EPLUS, WSCA, APOLLIT, CORROSION, EMA, RAPRA, EMBASE, SCISEARCH' ENTERED AT 12:18:00 ON 11 JUL 2005

L99 1277 SEA ABB=ON PLU=ON L55 (3A) L57  
L100 336 SEA ABB=ON PLU=ON L99 AND L58  
L101 37 SEA ABB=ON PLU=ON L100 AND (?WATERPROOF? OR ?OILPROOF? OR ((L77 OR L78) (2A) L79))  
L102 37 DUP REM L101 (0 DUPLICATES REMOVED)  
ANSWERS '1-32' FROM FILE WSCA  
ANSWERS '33-36' FROM FILE RAPRA  
ANSWER '37' FROM FILE SCISEARCH  
L103 7 SEA ABB=ON PLU=ON L102 AND (AY<2000 OR PY<2000 OR PRY<2000 OR MY<2000)  
SAVE TEMP L103 OH254MUL1B/A  
L104 30 SEA ABB=ON PLU=ON L102 NOT L103  
SAVE TEMP L104 OH254MUL1A/A  
D SAVED

FILE 'STNGUIDE' ENTERED AT 12:35:10 ON 11 JUL 2005

FILE 'HCAPLUS, MEDLINE, BIOSIS, PASCAL, JICST-EPLUS, WSCA, APOLLIT, CORROSION, EMA, RAPRA, EMBASE, SCISEARCH, CONF, CONFSCI, WPIX' ENTERED AT 12:36:28 ON 11 JUL 2005

L105 292 SEA ABB=ON PLU=ON TURRI, S?/AU  
L106 5822 SEA ABB=ON PLU=ON LEVI, M?/AU  
L107 80 SEA ABB=ON PLU=ON TROMBETTA, T?/AU  
L108 196 SEA ABB=ON PLU=ON (L105 OR L106 OR L107) AND (?URETHAN? OR ?POLYURETHAN? OR ?OLIGOURETHAN?)  
L109 86 DUP REM L108 (110 DUPLICATES REMOVED)  
ANSWERS '1-55' FROM FILE HCAPLUS  
ANSWERS '56-61' FROM FILE PASCAL  
ANSWERS '62-73' FROM FILE WSCA  
ANSWERS '74-76' FROM FILE APOLLIT  
ANSWER '77' FROM FILE CORROSION  
ANSWERS '78-80' FROM FILE EMA  
ANSWERS '81-83' FROM FILE RAPRA  
ANSWERS '84-85' FROM FILE SCISEARCH  
ANSWER '86' FROM FILE WPIX  
L110 44 SEA ABB=ON PLU=ON L109 AND ?AUSIMONT?/PA,CS,SO,IN,BI  
L111 43 SEA ABB=ON PLU=ON L110 AND L55  
L112 5 SEA ABB=ON PLU=ON L111 AND (?WATERPROOF? OR ?OILPROOF? OR ((L77 OR L78) (3A) L79))  
SAVE TEMP L112 OH254MULINV/A  
D SAVED

FILE 'STNGUIDE' ENTERED AT 12:48:11 ON 11 JUL 2005

FILE 'REGISTRY' ENTERED AT 12:49:27 ON 11 JUL 2005  
FILE 'ZCAPLUS' ENTERED AT 12:49:29 ON 11 JUL 2005  
FILE 'HCAPLUS' ENTERED AT 12:49:32 ON 11 JUL 2005  
FILE 'MEDLINE' ENTERED AT 12:49:34 ON 11 JUL 2005  
FILE 'BIOSIS' ENTERED AT 12:49:37 ON 11 JUL 2005  
FILE 'PASCAL' ENTERED AT 12:49:39 ON 11 JUL 2005  
FILE 'JICST-EPLUS' ENTERED AT 12:49:43 ON 11 JUL 2005  
FILE 'WSCA' ENTERED AT 12:49:56 ON 11 JUL 2005  
FILE 'APOLLIT' ENTERED AT 12:50:02 ON 11 JUL 2005  
FILE 'CORROSION' ENTERED AT 12:50:08 ON 11 JUL 2005  
FILE 'EMA' ENTERED AT 12:50:11 ON 11 JUL 2005  
FILE 'RAPRA' ENTERED AT 12:50:15 ON 11 JUL 2005  
FILE 'EMBASE' ENTERED AT 12:50:20 ON 11 JUL 2005  
FILE 'SCISEARCH' ENTERED AT 12:50:24 ON 11 JUL 2005  
FILE 'CONF' ENTERED AT 12:50:27 ON 11 JUL 2005  
FILE 'CONFSCI' ENTERED AT 12:50:31 ON 11 JUL 2005  
FILE 'WPIX' ENTERED AT 12:50:35 ON 11 JUL 2005  
FILE 'USPATFULL' ENTERED AT 12:50:52 ON 11 JUL 2005  
FILE 'STNGUIDE' ENTERED AT 12:50:57 ON 11 JUL 2005  
D QUE L51  
D QUE L10  
D QUE L98  
D QUE L103

FILE 'HCAPLUS, WPIX, USPATFULL, WSCA, RAPRA, SCISEARCH' ENTERED AT  
12:51:39 ON 11 JUL 2005

L113 45 DUP REM L51 L10 L98 L103 (1 DUPLICATE REMOVED)  
ANSWERS '1-22' FROM FILE HCAPLUS  
ANSWERS '23-37' FROM FILE WPIX  
ANSWER '38' FROM FILE USPATFULL  
ANSWERS '39-40' FROM FILE WSCA  
ANSWERS '41-44' FROM FILE RAPRA  
ANSWER '45' FROM FILE SCISEARCH

FILE 'STNGUIDE' ENTERED AT 12:51:56 ON 11 JUL 2005

FILE 'WPIX, HCAPLUS, USPATFULL, WSCA, RAPRA, SCISEARCH' ENTERED AT  
12:52:27 ON 11 JUL 2005  
D IBIB ED AB HITIND

FILE 'STNGUIDE' ENTERED AT 12:52:28 ON 11 JUL 2005

FILE 'WPIX, HCAPLUS, USPATFULL, WSCA, RAPRA, SCISEARCH' ENTERED AT  
12:52:50 ON 11 JUL 2005

D IBIB ED AB HITIND 2-22

FILE 'STNGUIDE' ENTERED AT 12:52:52 ON 11 JUL 2005

FILE 'WPIX, HCAPLUS, USPATFULL, WSCA, RAPRA, SCISEARCH' ENTERED AT  
12:54:21 ON 11 JUL 2005

D IALL ABEQ TECH ABEX 23-37

FILE 'STNGUIDE' ENTERED AT 12:54:27 ON 11 JUL 2005

FILE 'WPIX, HCAPLUS, USPATFULL, WSCA, RAPRA, SCISEARCH' ENTERED AT  
12:55:23 ON 11 JUL 2005

D IBIB AB HITSTR 38

FILE 'STNGUIDE' ENTERED AT 12:55:25 ON 11 JUL 2005

FILE 'WPIX, HCAPLUS, USPATFULL, WSCA, RAPRA, SCISEARCH' ENTERED AT  
12:55:46 ON 11 JUL 2005

D IBIB ED AB HITIND 39-

FILE 'STNGUIDE' ENTERED AT 12:56:08 ON 11 JUL 2005

D QUE L112

FILE 'HCAPLUS' ENTERED AT 12:57:37 ON 11 JUL 2005

D IBIB ED AB L112 1-

FILE 'STNGUIDE' ENTERED AT 12:57:40 ON 11 JUL 2005

FILE 'STNGUIDE' ENTERED AT 12:57:51 ON 11 JUL 2005

D QUE L51

D QUE L10

D QUE L98

D QUE L103

D QUE L112

FILE HOME

FILE STNGUIDE

FILE CONTAINS CURRENT INFORMATION.

LAST RELOADED: Jul 8, 2005 (20050708/UP).

FILE WPIX

FILE LAST UPDATED: 7 JUL 2005 <20050707/UP>

MOST RECENT DERWENT UPDATE: 200543 <200543/DW>

DERWENT WORLD PATENTS INDEX SUBSCRIBER FILE, COVERS 1963 TO DATE

>>> FOR A COPY OF THE DERWENT WORLD PATENTS INDEX STN USER GUIDE,  
PLEASE VISIT:

[http://www.stn-international.de/training\\_center/patents/stn\\_guide.pdf](http://www.stn-international.de/training_center/patents/stn_guide.pdf) <<<

>>> FOR DETAILS OF THE PATENTS COVERED IN CURRENT UPDATES, SEE

<http://thomsonderwent.com/coverage/latestupdates/> <<<

>>> FOR INFORMATION ON ALL DERWENT WORLD PATENTS INDEX USER

GUIDES, PLEASE VISIT:

<http://thomsonderwent.com/support/userguides/>

&lt;&lt;&lt;

>>> NEW! FAST-ALERTING ACCESS TO NEWLY-PUBLISHED PATENT  
DOCUMENTATION NOW AVAILABLE IN DERWENT WORLD PATENTS INDEX  
FIRST VIEW - FILE WPIFV.

FOR FURTHER DETAILS: <http://www.thomsonderwent.com/dwpifv> <<<

>>> THE CPI AND EPI MANUAL CODES HAVE BEEN REVISED FROM UPDATE 200501.  
PLEASE CHECK:

<http://thomsonderwent.com/support/dwpioref/reftools/classification/code-rev>  
FOR DETAILS. <<<

#### FILE HCAPLUS

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FILE COVERS 1907 - 11 Jul 2005 VOL 143 ISS 3  
FILE LAST UPDATED: 10 Jul 2005 (20050710/ED)

New CAS Information Use Policies, enter HELP USAGETERMS for details.

This file contains CAS Registry Numbers for easy and accurate substance identification.

#### FILE REGISTRY

Property values tagged with IC are from the ZIC/VINITI data file provided by InfoChem.

STRUCTURE FILE UPDATES: 10 JUL 2005 HIGHEST RN 854370-36-8  
DICTIONARY FILE UPDATES: 10 JUL 2005 HIGHEST RN 854370-36-8

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TSCA INFORMATION NOW CURRENT THROUGH JANUARY 18, 2005

Please note that search-term pricing does apply when conducting SmartSELECT searches.

\*\*\*\*\*  
\*  
\* The CA roles and document type information have been removed from \*  
\* the IDE default display format and the ED field has been added, \*  
\* effective March 20, 2005. A new display format, IDERL, is now \*  
\* available and contains the CA role and document type information. \*  
\*  
\*\*\*\*\*

Crossover limits have been increased. See HELP CROSSOVER for details.

Experimental and calculated property data are now available. For more

information enter HELP PROP at an arrow prompt in the file or refer to the file summary sheet on the web at:  
<http://www.cas.org/ONLINE/DBSS/registryss.html>

## FILE USPATFULL

FILE COVERS 1971 TO PATENT PUBLICATION DATE: 7 Jul 2005 (20050707/PD)  
FILE LAST UPDATED: 7 Jul 2005 (20050707/ED)  
HIGHEST GRANTED PATENT NUMBER: US6915531  
HIGHEST APPLICATION PUBLICATION NUMBER: US2005150027  
CA INDEXING IS CURRENT THROUGH 7 Jul 2005 (20050707/UPCA)  
ISSUE CLASS FIELDS (/INCL) CURRENT THROUGH: 7 Jul 2005 (20050707/PD)  
REVISED CLASS FIELDS (/NCL) LAST RELOADED: Jun 2005  
USPTO MANUAL OF CLASSIFICATIONS THESAURUS ISSUE DATE: Jun 2005

>>> USPAT2 is now available. USPATFULL contains full text of the <<<  
>>> original, i.e., the earliest published granted patents or <<<  
>>> applications. USPAT2 contains full text of the latest US <<<  
>>> publications, starting in 2001, for the inventions covered in <<<  
>>> USPATFULL. A USPATFULL record contains not only the original <<<  
>>> published document but also a list of any subsequent <<<  
>>> publications. The publication number, patent kind code, and <<<  
>>> publication date for all the US publications for an invention <<<  
>>> are displayed in the PI (Patent Information) field of USPATFULL <<<  
>>> records and may be searched in standard search fields, e.g., /PN, <<<  
>>> /PK, etc. <<<

>>> USPATFULL and USPAT2 can be accessed and searched together <<<  
>>> through the new cluster USPATALL. Type FILE USPATALL to <<<  
>>> enter this cluster. <<<  
>>> <<<  
>>> Use USPATALL when searching terms such as patent assignees, <<<  
>>> classifications, or claims, that may potentially change from <<<  
>>> the earliest to the latest publication. <<<

This file contains CAS Registry Numbers for easy and accurate substance identification.

## FILE MEDLINE

FILE LAST UPDATED: 9 JUL 2005 (20050709/UP). FILE COVERS 1950 TO DATE.

On December 19, 2004, the 2005 MeSH terms were loaded.

The MEDLINE reload for 2005 is now available. For details enter HELP RLOAD at an arrow prompt (=>). See also:

<http://www.nlm.nih.gov/mesh/>  
[http://www.nlm.nih.gov/pubs/techbull/nd04/nd04\\_mesh.html](http://www.nlm.nih.gov/pubs/techbull/nd04/nd04_mesh.html)

OLDMEDLINE now back to 1950.

MEDLINE thesauri in the /CN, /CT, and /MN fields incorporate the MeSH 2005 vocabulary.

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## FILE BIOSIS

FILE COVERS 1969 TO DATE.

CAS REGISTRY NUMBERS AND CHEMICAL NAMES (CNs) PRESENT



FROM JANUARY 1969 TO DATE.

RECORDS LAST ADDED: 8 July 2005 (20050708/ED)

FILE RELOADED: 19 October 2003.

FILE PASCAL

FILE LAST UPDATED: 11 JUL 2005 <20050711/UP>

FILE COVERS 1977 TO DATE.

>>> SIMULTANEOUS LEFT AND RIGHT TRUNCATION IS AVAILABLE  
IN THE BASIC INDEX (/BI) FIELD <<<

FILE JICST-EPLUS

FILE COVERS 1985 TO 4 JUL 2005 (20050704/ED)

THE JICST-EPLUS FILE HAS BEEN RELOADED TO REFLECT THE 1999 CONTROLLED  
TERM (/CT) THESAURUS RELOAD.

FILE WSCA

FILE LAST UPDATED: 27 JUN 2005 <20050627/UP>

FILE COVERS 1976 TO DATE

>>> Simultaneous left and right truncation is available in the  
basic index (/BI), and chemical name (/CN) field. <<<

FILE APOLLIT

FILE LAST UPDATED: 29 JUN 2005 <20050629/UP>

FILE COVERS 1973 TO DATE

FILE CORROSION

FILE LAST UPDATED: 22 JUN 2005 <20050622/UP>

FILE COVERS 1980 TO DATE.

FILE EMA

FILE LAST UPDATED: 29 JUN 2005 <20050629/UP>

FILE COVERS 1986 TO DATE.

FILE RAPRA

FILE LAST UPDATED: 7 JUL 2005 <20050707/UP>

FILE COVERS 1972 TO DATE

>>> Simultaneous left and right truncation is available in the  
basic index (/BI), and in the controlled term (/CT),  
geographical term (/GT), and non-polymer term (/NPT) fields. <<<

>>> The RAPRA Classification Code is available as a PDF file

>>> and may be downloaded free-of-charge from:

>>> [http://www.stn-international.de/stndatabases/details/rapra\\_classcodes](http://www.stn-international.de/stndatabases/details/rapra_classcodes).

FILE EMBASE

FILE COVERS 1974 TO 7 Jul 2005 (20050707/ED)

EMBASE has been reloaded. Enter HELP RLOAD for details.

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substance identification.

FILE SCISEARCH  
FILE COVERS 1974 TO 8 Jul 2005 (20050708/ED)

FILE CONF  
FILE LAST UPDATED: 8 JUL 2005 <20050708/UP>  
FILE COVERS 1976 TO DATE.

FILE CONFSCI  
FILE COVERS 1973 TO 25 May 2005 (20050525/ED)

FILE ZCAPLUS

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FILE COVERS 1907 - 11 Jul 2005 VOL 143 ISS 3  
FILE LAST UPDATED: 10 Jul 2005 (20050710/ED)

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=> file stnguide

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=> log y